

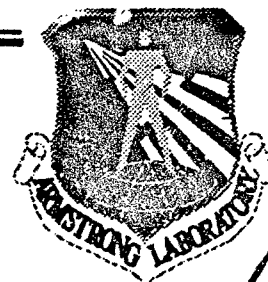
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POSTDECOMMISSIONING RADIOLOGICAL  
SURVEY OF BUILDING 628,  
McClellan AFB CA

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OCCUPATIONAL AND ENVIRONMENTAL  
HEALTH DIRECTORATE  
Brooks Air Force Base, TX 78235-5000

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Final Report for Period February 1990 - June 1991

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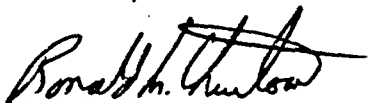
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13. ABSTRACT (Maximum 200 words) Building 628 was formerly a radiochemistry laboratory used by the Technical Operations Division. The operations at building 628 involved the use of unsealed radioactive material, therefore the potential for radioactive contamination in building 628 existed. The objective of the survey was to assess the presence of any alpha, beta and gamma contamination in both fixed and removable forms. The fixed contamination was assessed by radiac instruments. Removable contamination was assessed by wiping the surfaces with filter paper. These "swipe" samples were then evaluated by AL/OEBSA. The results of more than 7,000 measurements indicated that no levels above the United States Nuclear Regulatory Commission guide exist in building 628. A recommendation that an application to the United States Nuclear Regulatory Commission be made for release of building 628 without any future radiological controls or monitoring required or needed is made.				
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POSTDECOMMISSIONING RADIOLOGICAL SURVEY OF BUILDING 628,  
McCLELLAN AFB, CALIFORNIA

INTRODUCTION

Purpose

A radiological survey of building 628 was performed to assure the building could be released to the public without restrictions.

Problem

Areas within building 628 were used formerly as a radiochemistry laboratory used by the Technical Operations Division. The operations at building 628 involved the use of unsealed radioactive material, therefore the potential for radioactive contamination in building 628 existed. The objective of the survey was to assess the presence of alpha, beta and gamma contamination in both fixed and removable forms.

Scope

The survey included assessing the fixed and removable contamination and the ambient radiation levels inside building 628. The fixed contamination was assessed by radiac instruments. Removable contamination was assessed by wiping the surfaces with filter paper. These "swipe" samples were then evaluated by AL/OEBSA, formerly AFOEHL/RZA. The ambient radiation levels were determined using an exposure rate radiation survey meter.

SURVEY PERSONNEL

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## DISCUSSIONS

The U.S. Nuclear Regulatory Commission (USNRC), Division of Industrial and Medical Safety, has produced "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for By-Product, Source, or Special Nuclear Material." The levels in this guide were used to determine the required survey detection sensitivities. Survey procedures were established to detect contamination at or above the USNRC guide.

For fixed alpha contamination the USNRC guide limit for unrestricted release is 100 dpm/100 cm<sup>2</sup>. Ludlum large area gas proportional floor monitors were used to monitor the floors for alpha contamination. The high voltage on the floor monitors was reset to assess beta and gamma contamination. Floor monitoring action levels are presented in Appendix A. Floor monitoring results are listed in Appendix B. Handheld instruments were used to assess alpha contamination on walls and ceilings. The Eberline Model AC3 alpha scintillation probes and Eberline ESP-2 scalars, Ludlum Model 61 Air Proportional and Nuclear Research Measurement ADM 300 Alpha Scintillation Probe were used to assess the presence of fixed alpha contamination. The AC3 probe has an area of 60 cm<sup>2</sup> and an approximate efficiency of 20% (.20 cpm/dpm) for alpha contamination. Factoring in the probe area and the efficiency results in six counts above background for a 30-second count, would indicate contamination above the USNRC guide. The Model 61 has an area of 60 cm<sup>2</sup> and an approximate efficiency of 10% (.10 cpm/dpm) for alpha contamination. Factoring in the probe area and the efficiency results in six counts in 1 minute above background, indicates contamination above the USNRC guide. The ADM 300 probe has an approximate efficiency of 20% (.20 cpm/dpm) and an area of 100 cm<sup>2</sup>. Factoring in the efficiency and probe area results in 10 counts above background in 30 seconds indicates contamination above the USNRC guide. Appendix C contains the action levels for the walls and ceilings. Walls and ceilings results are listed in Appendix D.

The USNRC guide limit of 1,000 dpm/100 cm<sup>2</sup> for beta and 5,000 dpm/100 cm<sup>2</sup> for gamma was used for fixed beta-gamma contamination. Bicron Geiger-Mueller "pancake" probes were used with Eberline ESP-2 scalars to assess the presence of beta and gamma contamination. The probe was positioned at the survey point and a 30-second count was made. The pancake probes had an area of 15.5 cm<sup>2</sup> and 10% efficiency for typical gamma sources and 30% efficiency for typical beta sources. Assuming 30% efficiency, a count rate of approximately 47 counts per minute above background would indicate possible beta contamination above the USNRC guide.

Ambient (background) radiation levels were monitored in all locations not receiving a detailed survey (non-processing areas) using a Ludlum Model 19 micro-R meter. This instrument measures gamma and x-ray radiation in units of microroentgen per hour. The micro-R meter is capable of detecting environmental levels of radiation. The ambient background was determined, and the non-processing areas surveyed for values above this background.

For removable contamination the most restrictive USNRC guide limit for alpha is 20 dpm/100 cm<sup>2</sup>. Removable contamination was assessed by wiping a given area with dry filter paper using moderate pressure. The area wiped for each sample was approximately 100 cm<sup>2</sup>. This area was chosen because it matches the levels listed in the guide described above. The filter papers were then counted by the AL/OEBSA using a Gamma Products G-5000 thin window gas proportional counter for beta and alpha emitting contamination and a high efficiency low background Bicron NaI detector for gamma emitting contamination.

The location of each wall swipe collected was recorded by standing in the entrance doorway and dividing the room into approximately 3' x 3' grids, left wall, back wall, and right wall. The number of swipes obtained depended upon the size of each wall. A minimum of two swipes per wall was taken at a height of 3 ft above the floor and equal distance from each end of the wall. Each swipe covered an approximate area of 100cm<sup>2</sup>. In addition, upon entry, each room floor was visually divided into 3' x 3' grids, numbering grids left to right, and front to back. One swipe per 3' x 3' grid was collected, again approximating 100cm<sup>2</sup> utilizing a "Z"-type collection method to obtain the greatest coverage while adhering to the 100cm<sup>2</sup> requirements.

Swipes were also collected behind cabinets in rooms 171, 181, 192B, 136C2, and 136C3. Two swipes were collected from behind the cabinet at a height of 2' above the floor, and two swipes were collected from behind the cabinet on the room floor equal distance from each end of the base cabinet. In rooms where a cabinet was removed but an outline was visible, two swipes were collected in addition to the normal swiping directive for the walls (Rooms 150B, 150C, 144A, 158, 151A, 162, 132A, 162, 179A, 188A, 190A). Note: Rooms 158, 151, 162, and 188 had two cabinet outlines, each of which was swiped.

Ceiling surfaces were swiped in rooms 150B and 150C. Each ceiling was divided into 3' x 3' areas, numbering left to right, and back of room to front. One swipe per 3' x 3' grid was taken, again utilizing a "Z"-type collection.

Heating Ventilation and Air Conditioning (HVAC) registers, air input/output ducts, and ceiling vents were swiped in rooms 105F, 150C, 150B, 151A, 151, 159, 162, 174A, 179A, 188A, 190A, 144A, 136A, and cubicles {2 HVACs each} 1-17. All sinks, drains, and industrial waste clean-outs were swiped. The rooms included are cubes 1-17, 156, 102, 187, 161, 151A, 150B, 132A, 174A, 181, 141, 168, 232, 179, 179A, 178, 145, 136, hallway outside room 174, 112, 106, 173, 159, 136F, 231, 150E, 162, 144, 171, 188, 190, and 191. Swipe results are listed in Appendix E.

Soil samples were collected at various locations. Ten soil samples were collected to determine the background around building 628. Fifty-two soil samples were collected in and around building 628 at depths ranging from just beneath the surface to 90 feet. Appendix F lists all soil sample locations and results.

Appendix G lists miscellaneous composite samples and analysis of contaminated concrete chips removed during decontamination efforts.

Appendix H is a summary of the pre-survey performed in Feb 90 by personnel from AL/OEBSC (formerly AFOEHL/RZA).

### CONCLUSIONS

Floor measurements for alpha levels were made in rooms 132A, 136A, 136 C2, 136 C3, 144A, 150B, 150C, 150E, 150F, 151, 151A, 158, 159, 162, 171, 174A, 179A, 181, 188A, 190A, 191, 192B, Cubicles 1-17 and Cubicle 18. One hundred percent of the floor area was measured with gas proportional floor monitors and four to twenty individual readings were made in each room. One location, grid 16-5, indicated alpha contamination above the USNRC guide. This location was decontaminated by scabbling the concrete surface. A survey after the decontamination indicated alpha readings at background. A sample of the removed material indicated Am-241 as the source of contamination. Appendix B lists, by room, the results of the alpha measurements. There were no other readings indicating activity above the USNRC guide.

Floor measurements for beta-gamma levels were made in rooms 132A, 136A, 136 C2, 136 C3, 144A, 150B, 150C, 150E, 150F, 151, 151A, 158, 159, 162, 171, 174A, 179A, 181, 188A, 190A, 191, 192B, Cubicles 1-17 and Cubicle 18. One hundred percent of the floor area was measured with a gas proportional survey meter and five to twenty individual readings were made in each room. The results are listed in Appendix B. All beta-gamma measurements indicated no activity above the applicable USNRC guide limits.

Walls and ceilings measurements for alpha levels were made in rooms 150C, 150B, 150E, 150F, Cubicle 4, Cubicle 9, Cubicle 12, Cubicle 15, Cubicle 16, Cubicle 17 and Cubicle 18. Rooms 136 C2, 136 C3, 171, 181 and 192B were surveyed behind cabinets and sinks only. A total of 2,766 alpha measurements were made in the various rooms. Appendix D lists walls and ceilings results. No readings indicated activity above the USNRC guide.

Walls and ceilings measurements for beta-gamma levels were made in rooms 150C, 150B, 150E, 150F, Cubicle 4, Cubicle 9, Cubicle 12, Cubicle 15, Cubicle 16, Cubicle 17 and Cubicle 18. Rooms 136 C2, 136 C3, 171, 181 and 192B were surveyed behind cabinets and sinks only. A total of 2,665 beta-gamma measurements were made in the structures being surveyed. Appendix D lists walls and ceilings results. No readings indicated activity above the USNRC guide.

Ambient radiation levels were recorded in all non-processing areas. All readings were similar and indicate no increased levels above background.

Removable contamination was assessed at approximately 900 locations by analyzing the swipe samples. All swipe samples were below the applicable limit specified in the USNRC guide.

Soil samples were collected from 52 locations inside and outside building 628 at depths ranging from the surface to 90 ft. Locations are listed in Appendix F. Ten additional samples were collected outside building 628 for background levels.

The results of more than 7,000 measurements indicate that no levels above the USNRC guide exist in building 628.

#### **RECOMMENDATION**

Application to the USNRC should be made for release of building 628 without any future radiological controls or monitoring required or needed.

**APPENDIX A**  
**Floor Monitoring Action Levels**

**APPENDIX A**  
**Floor Monitoring Action Levels**

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FLOOR MONITORING  
ACTION LEVEL CALCULATIONS

Alpha

Average Level = 100 dpm/100 cm<sup>2</sup>  
Maximum Level = 300 dpm/100 cm<sup>2</sup>

Correction for detector area (= 425 cm<sup>2</sup>):

= 425 dpm/425 cm<sup>2</sup> for Average Level  
= 1275 dpm/425 cm<sup>2</sup> for Maximum Level

Conversion to cpm:

(425 dpm) \* efficiency(cpm/dpm) = Average Level in cpm  
(1275 dpm) \* efficiency(cpm/dpm) = Maximum Level in cpm

<u>Unit</u>	<u>Eff(Pu)</u>	<u>Average Action Level(cpm)</u>	<u>Maximum Action Level(cpm)</u>
41464	.28	119	357
67440	.16	68	204
41467	.23	98	293
41463	.26	111	332

Beta-Gamma

Average Level = 1000 dpm/100 cm<sup>2</sup>  
Maximum Level = 3000 dpm/100 cm<sup>2</sup>

Correction for detector area (= 425 cm<sup>2</sup>):

= 4250 dpm/425 cm<sup>2</sup> for Average Level  
= 12750 dpm/425 cm<sup>2</sup> for Maximum Level

Conversion to cpm:

(4250 dpm) \* efficiency(cpm/dpm) = Average Level in cpm  
(12750 dpm) \* efficiency(cpm/dpm) = Maximum Level in cpm

<u>Unit</u>	<u>Eff(Sr-90)</u>	<u>Average Action Level(cpm)</u>	<u>Maximum Action Level(cpm)</u>
41464	.11	466	1403
67440	.08	340	1020
41467	.16	680	2040
41463	.12	510	1530

Acceptable average level in room:

Gross counts - Background ≤ Action Level

**APPENDIX B**  
**Floor Monitoring Results**

# FLOOR MONITORING

<u>Room</u>	<u>Floor Monitor Serial Number</u>		<u>Average Level (dpm/100 cm<sup>2</sup>)</u>		<u>Peak Level (dpm/100 cm<sup>2</sup>)</u>	
	<u>Alpha</u>	<u>Beta-Gamma</u>	<u>Alpha</u>	<u>Beta-Gamma</u>	<u>Alpha</u>	<u>Beta-Gamma</u>
132 A	67440	41463	< 100	< 1000	< 100	< 1000
136 A	67440	41463	< 100	< 1000	< 100	< 1000
136 C2	67440	41463	< 100	< 1000	< 100	< 1000
136 C3	67440	41463	< 100	< 1000	< 100	< 1000
144 A	41464	41467	< 100	< 1000	< 100	< 1000
150 B	41467	41464	< 100	< 1000	< 100	< 1000
150 C	41464	41464	< 100	< 1000	< 100	< 1000
150 E	41467	41464	< 100	< 1000	< 100	< 1000
150 F	41467	41467	< 100	< 1000	< 100	< 1000
151	67440	41464	< 100	< 1000	< 100	< 1000
151 A	67440	41464	< 100	< 1000	< 100	< 1000
158	67440	41463	< 100	< 1000	< 100	< 1000
159	41464	41463	< 100	< 1000	< 100	< 1000
162	67440	67440	< 100	< 1000	< 100	< 1000
171	41464	67440	< 100	< 1000	< 100	< 1000
174 A	41464	67440	< 100	< 1000	< 100	< 1000
179 A	41464	67440	< 100	< 1000	< 100	< 1000
181	41464	67440	< 100	< 1000	< 100	< 1000
188 A	41464	41467	< 100	< 1000	< 100	< 1000
190 A	67440	41467	< 100	< 1000	< 100	< 1000
191	67440	41467	< 100	< 1000	< 100	< 1000
192 B	41464	41467	< 100	< 1000	< 100	< 1000

Cubicles 1-17					
41464	41463	< 100	< 1000	443*	< 1000
41467					
67440					

Cubicle 18					
41467	67440	< 100	< 1000	< 100	< 1000

---

\* Decontamination and resurvey requested. Detail survey indicated area of contamination was approximately 100 cm<sup>2</sup>.

**APPENDIX C**  
**Walls and Ceilings Action Levels**

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# WALL AND CEILING MONITORING ACTION LEVEL CALCULATIONS

## Alpha

Action Level = 100 dpm/100 cm<sup>2</sup>  
Maximum Level = 300 dpm/100 cm<sup>2</sup>

Correction for probe face area (= 60 cm<sup>2</sup>):

= 60 dpm/60 cm<sup>2</sup> for Action Level  
= 180 dpm/60 cm<sup>2</sup> for Max Level

Conversion to cpm:

(60 dpm) \* efficiency(cpm/dpm) = Action Level in cpm  
(180 dpm) \* efficiency(cpm/dpm) = Max Level in cpm

<u>Unit</u>	<u>Eff(Am-241)</u>	<u>Action Level(cpm)</u>	<u>Max Level(cpm)</u>
AC-3 with ESP-2	.23	14	41
Ludlum 61	.10	6	18
ADM- 300*	.22	22	66

## Beta-Gamma

Action Level = 1000 dpm/100 cm<sup>2</sup>  
Maximum Level = 3000 dpm/100 cm<sup>2</sup>

Correction for probe face area (= 15.5 cm<sup>2</sup>):

= 155 dpm/15.5 cm<sup>2</sup> for Action Level  
= 465 dpm/15.5 cm<sup>2</sup> for Max Level

Conversion to cpm:

(155 dpm) \* efficiency(cpm/dpm) = Action Level in cpm  
(465 dpm) \* efficiency(cpm/dpm) = Max Level in cpm

<u>Unit</u>	<u>Efficiency</u>	<u>Action Level(cpm)</u>	<u>Max Level(cpm)</u>
PGM with Esp-2	.30	47	140

Acceptable average level in room:

Gross counts - Background ≤ Action Level

---

\* ADM-300 probe face area = 100 cm<sup>2</sup>

**APPENDIX D**  
**Walls and Ceilings Results**

# WALL AND CEILING MONITORING

<u>Room</u>	<u>Survey Meter Serial Number</u>		<u>Average Level (dpm/100 cm<sup>2</sup>)</u>		<u>Peak Level (dpm/100 cm<sup>2</sup>)</u>	
	<u>Alpha</u>	<u>Beta-Gamma</u>	<u>Alpha</u>	<u>Beta-Gamma</u>	<u>Alpha</u>	<u>Beta-Gamma</u>
Cubicles 1-17						
	03594	03559	< 100	< 1000	< 100	< 1000
	03658	03653				
	03548	03657				
	03593					
Cubicle 18						
	03594	03559	< 100	< 1000	< 100	< 1000
	03548	03653				
	03593	03657				
	03658					
150 C	46836	03659	< 100	< 1000	< 100	< 1000
	43093	03653				
	60678	03657				
150 B	03657	03657	< 100	< 1000	< 100	< 1000
	03562	03659				
	03660					
150 E	46836	03659	< 100	< 1000	< 100	< 1000
	43093	03653				
	60678	03657				
150 F	03594	03659	< 100	< 1000	< 100	< 1000
	60678	03653				
	03593	03657				
136 C2*	03548	03652	< 100	< 1000	< 100	< 1000
136 C3*	03658	03652	< 100	< 1000	< 100	< 1000
171*	03548	03653	< 100	< 1000	< 100	< 1000
181*	03658	03653	< 100	< 1000	< 100	< 1000
192 B*	03593	03653	< 100	< 1000	< 100	< 1000

\* Surveyed behind cabinets and sinks only

**APPENDIX E**  
**Swipe Results**

McClellan AFB Bldg 628

Room #136A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005815	left wall #1	<3	<2	<111
49005816	left wall #2	<3	<4	<111
49005820	back wall #1	<4	<3	<111
49005817	right wall #1	<3	<2	<111
49005818	right wall #2	<1	<3	<111
49005819	right wall #3	<2	<3	<111
49005821	right wall #4	<2	<2	<111
49005822	floor #1	<3	<1	<111
49005823	floor #2	<1	<1	<111
49006228	HVAC-S #1622	<2	3 +/-2	<111
49006229	HVAC-N #1623	<3	<2	<111
49006262	Industrial waste sink drain	<3	<3	<111

McClellan AFB Bldg 628

Miscellaneous Swipes

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006025	Industrial waste clean out #1 rm 156	<2	<2	<111
49006026	Industrial waste clean out #2 rm 102	<2	<2	<111
49006032	Industrial waste clean out #10 O/S rm 187	<2	<2	<111
49006034	Industrial waste clean out #12 rm B2	<2	<2	<111
49006038	Industrial waste clean out #16 rm 161	<2	<2	<111
49006259	cube 18 sink/hood	<3	<2	<111
49006260	rm162-s sink/hood	<3	<3	<111
49006261	rm162-n sink/hood	<2	<2	<111
49006262	rm136a sink drain	<3	<3	<111
49006263	rm136C2 sink drain	<2	<2	<111
49006264	rm136C3 sink drain	<2	<2	<111
49006265	rm144A sink drain	<2	<4	<111
49006266	rm150B sink drain	<3	<2	<111
49006267	rm151A sink drain	<3	<2	<111
49006268	rm158 sink drain	<3	<4	<111
49006269	rm171 sink drain	<2	<2	<111
49006270	rm188A sink drain	<3	<2	<111
49006271	rm190A sink drain	<3	<2	<111
49006272	rm191 sink drain	<3	<2	<111

49006273	rm192B sink drain	<2	<2	<111
49006359	rm132A sink drain	<3	<2	<111
49006360	rm174A sink drain	<3	<2	<111
49006361	rm179A sink drain	<3	<2	<111
49006362	rm181 sink drain	<3	<2	<111
49006363	rm141 sink trap	<1	<1	<111
49006364	rm168 sink trap	<1	<2	<111
49006365	rm232 sink trap center sink	<3	<3	<111
49006366	rm179 floor drain sw #1	<3	<2	<111
49006367	rm232 floor drain	<3	<3	<111
49006368	rm179 floor drain a-s #3	<1	<2	<111
49006369	rm178E floor drain #4	<3	<1	<111
49006370	rm145 floor drain #5	<2	3+/-2	<111
49006371	rm136A floor drain #6	<3	<3	<111
49006372	rm145 clean out #1	<3	<3	<111
49006373	rm179-N clean out #3	<1	<1	<111
49006374	rm174A-E clean out #4	<2	<1	<111
49006375	rm112-N clean out #5	<3	<2	<111
49006376	rm106N clean out #6	<1	<1	<111
49006377	rm173 N clean out #7	<3	<2	<111
49006378	rm159 clean out #3	<3	<2	<111
49006379	rm136F clean out #9	<3	<2	<111
49006380	rm231 clean out #10	<3	<2	<111

49100807	cube 4 ww-2 center	<2		
49100808	cube 4 c-7 right top	<2		
49100809	cube 15 c-10 center	<3		
49100810	cube 15 c-13 right bottom	<3		
49100811	cube 15 c-14 left bottom	<3		
49100812	cube 15 c-17 right top	<2		
49100813	cube 15 c-18 left top	<3		
49100814	cube 18 NW-4 center	<3		
49100815	cube 18 c-13 center	<3		
49100801	post decon cube 16	<2	<2	<111
49100802	breaker bar for scrabble	<1	<2	<111

McClellan AFB Bldg 628

Mondoid Room  
Cubicle #1

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005935	left wall #1	<3	<2	<111
49005936	left wall #2	<2	<2	<111
49005937	rear wall #1	<3	<2	<111
49005938	rear wall #2	<2	<2	<111
49005939	grid #1	<3	2 +/-2	<111
49005940	grid #2	<3	<2	<111
49006191	East HVAC	<5	3 +/-2	<111
49006192	cube HVAC	<2	<2	<111
49006274	hood drain	<3	<2	<111
49006275	sink drain	<3	<2	<111
49006028	Industrial sink clean out #4	<2	<2	<111
49006276	1/2 drain hood	<3	<2	<111
49006277	1/2 drain sink	<3	<2	<111

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Mondoid Room  
Cubicle #2

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005941	back wall #1	<3	<2	<111
49005942	back wall #2	<2	<3	<111
49005943	grid #1	<2	<4	<111
49005944	grid #2	<2	<2	<111
49006193	East HVAC	<3	<4	<111
49006194	cube HVAC	<3	<2	<111
49006278	2/3 hood drain	<2	<2	<111
49006279	2/3 sink drain	<3	<2	<111
49006042	S Industrial waste floor drain	<3	<2	<111
49006037	Industrial waste clean out	<2	<2	<111

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Mondoid Room  
Cubicle #3

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005945	back wall #1	<3	<2	<111
49005946	back wall #2	<2	<2	<111
49005947	grid #1	<3	<4	<111
49005948	grid #2	<2	<2	<111
49006195	East HVAC	<3	<3	<111
49006196	cube HVAC	<3	<2	<111
49006280	3/4 hood drain	<3	<3	<111
49006281	3/4 sink drain	<3	<2	<111

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Mondoid Room  
Cubicle #4

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005949	back wall #1	<2	<3	<111
49005950	back wall #2	<2	<2	<111
49006197	East HVAC	<3	<2	<111
49006198	cube HVAC	<3	<2	<111
49006282	4/5 sink drain	<3	<2	<111
49006283	4/5 hood drain	<4	<3	<111
49005963	*W wall	<3	<2	<111
49005964	*60 cpm	<2	<2	<111

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Mondoid Room  
Cubicle #5

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005953	back wall #1	<2	<2	<111
49005954	back wall #2	<3	<2	<111
49005955	grid #1	<2	<2	<111
49005956	grid #2	<2	<2	<111
49006199	East HVAC	<3	<2	<111
49006200	cube HVAC	<3	<2	<111
49006284	5/6 hood drain	<3	<2	<111
49006285	5/6 sink drain	<2	<2	<111
49006030	S Industrial waste clean out	<2	<2	<111

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Mondoid Room  
Cubicle #6

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005957	back wall #1	<3	<2	<111
49005958	back wall #2	<3	<2	<111
49005959	right wall #1	<3	<2	<111
49005960	right wall #2	<2	<2	<111
49005961	grid #1	<3	<2	<111
49005962	grid #2	<3	<2	<111
49006201	East HVAC	<2	<3	<111
49006202	cube HVAC	<3	<2	<111
49006286	6/7 hood drain	<2	<3	<111
49006287	6/7 sink drain	<2	<2	<111

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Mondoid Room  
Cubicle #7

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005965	left wall #1	<3	<2	<111
49005966	left wall #2	<2	<2	<111
49005967	back wall #1	<3	<2	<111
49005968	back wall #2	<3	<2	<111
49005969	floor #1	<4	6 +/-3	<111
49005970	floor #2	<3	<2	<111
49006203	East HVAC	<2	3 +/-2	<111
49006204	cube HVAC	<3	<3	<111
49006288	7/8 hood drain	<2	<2	<111
49006289	7/8 sink drain	<3	<3	<111

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Mondoid Room  
Cubicle #8

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005971	back wall #1	<3	<2	<111
49005972	back wall #2	<3	<2	<111
49005973	floor #1	<3	<2	<111
49005974	floor #2	<3	<2	<111
49006205	East HVAC	<2	<3	<111
49006206	cube HVAC	<3	<2	<111
49006290	8/9 hood drain	<2	<3	<111
49006291	8/9 sink drain	<2	<2	<111
49006043	S Industrial waste floor drain	<2	<2	<111

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Mondoid Room  
Cubicle #9

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005975	back wall #1	<2	3 +/-2	<111
49005976	back wall #2	<3	<2	<111
49005977	floor #1	<3	<2	<111
49005978	floor #2	<2	<2	<111
49006207	East HVAC	<2	<2	<111
49006208	cube HVAC	2 +/-2	<2	<111
49006292	9/10 hood drain	<2	<2	<111
49006293	9/10 sink drain	<3	<2	<111
49006039	S Industrial waste clean out	<2	<2	<111
49006014	* 9 wall	<2	<3	<111

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Mondoid Room  
Cubicle #10

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005979	back wall #1	<2	<2	<111
49005980	back wall #2	<4	<4	<111
49005981	floor #1	<2	<2	<111
49005982	floor #2	<2	<2	<111
49006209	East HVAC	<2	<2	<111
49006210	cube HVAC	<2	<2	<111
49006294	10/11 hood drain	<2	<2	<111
49006295	10/11 sink drain	<4	<3	<111
49006036	S Industrial waste clean out #14	<3	<2	<111

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Mondoid Room  
Cubicle #11

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005983	back wall #1	<2	<2	<111
49005984	back wall #2	<3	<2	<111
49005985	floor #1	<3	<2	<111
49005986	floor #2	<2	<2	<111
49006029	S Industrial waste clean out #5	<2	<2	<111
49006211	East HVAC	<2	<2	<111
49006212	cube HVAC	<3	<2	<111
49006296	11/12 hood drain	<3	<2	<111
49006297	11/12 sink drain	<3	<2	<111
49006015	* 11 floor	<3	<2	<111

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Mondoid Room  
Cubicle #12

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005987	back wall #1	<3	2 +/-2	<111
49005988	back wall #2	<2	<2	<111
49005989	floor #1	<3	<2	<111
49005990	floor #2	<2	<2	<111
49006035	S Industrial waste clean out #13	<2	<2	<111
49006213	East HVAC	<3	<2	<111
49006214	cube HVAC	<3	<2	<111
49006298	12/13 hood drain	<3	<2	<111
49006299	12/13 sink drain	<3	<2	<111
49006013	* 12 wall	<3	<2	<111
49006016	* 12 floor	<2	<3	<111

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Mondoid Room  
Cubicle #13

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005991	back wall #1	<2	<2	<111
49005992	back wall #2	<2	<2	<111
49005993	floor #1	<2	<2	<111
49005994	floor #2	<2	<2	<111
49006215	East HVAC	<2	<2	<111
49006216	cube HVAC	<3	<2	<111
49006300	13/14 hood drain	<2	<2	<111
49006301	13/14 sink drain	<3	<2	<111
49006033	S Industrial waste clean out #11	<2	<2	<111

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Mondoid Room  
Cubicle #14

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005995	back wall #1	<3	<3	<111
49005996	back wall #2	<2	<2	<111
49005997	floor #1	<3	<2	<111
49005998	floor #2	<2	<2	<111
49006217	East HVAC	<3	<2	<111
49006218	cube HVAC	<3	<2	<111
49006302	14/15 hood drain	<2	<3	<111
49006303	14/15 sink drain	<3	<3	<111

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Mondoid Room  
Cubicle #15

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005999	back wall #1	<5	3 +/-2	<111
49006000	back wall #2	<3	<2	<111
49006001	floor #1	<3	<2	<111
49060002	floor #2	<2	<4	<111
49006304	15/16 hood drain	<3	<2	<111
49006305	15/16 sink drain	<3	<2	<111
49006219	East HVAC	<3	<2	<111
49006220	cube HVAC	<2	<2	<111
49006031	S Industrial waste clean out #9	<2	<2	<111

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Mondoid Room  
Cubicle #16

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006003	back wall #1	<3	<2	<111
49006004	back wall #2	<3	<2	<111
49006005	floor #1	<2	<2	<111
49006006	floor #2	<3	<2	<111
49006306	16/17 hood drain	<2	<2	<111
49006307	16/17 sink drain	<2	<2	<111
49006221	East HVAC	<3	<4	<111
49006222	cube HVAC	<3	<2	<111
49006027	S Industrial waste clean out #3	<3	<2	<111
49006017	*16 floor	<2	<2	<111
49006018	*16 floor	<3	<3	<111

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Mondoid Room  
Cubicle #17

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006007	back wall #1	<2	<2	<111
49006008	back wall #2	<3	<2	<111
49006009	right wall #1	<2	<2	<111
49006010	right wall #2	<3	<2	<111
49006011	floor #1	<2	<3	<111
49006012	floor #2	<3	<2	<111
49006308	17 hood drain	<2	<2	<111
49006309	17 sink drain	<2	<3	<111
49006223	East HVAC	<3	<2	<111
49006224	cube HVAC	<3	<2	<111
49006019	*17 W wall	<3	<3	<111
49006020	*17 N wall	<3	<2	<111

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Room #150F

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006066	left wall #1	<2	<2	<111
49006067	left wall #2	<2	<2	<111
49006068	left wall #3	<3	<3	<111
49006069	back wall #1	<3	<2	<111
49006070	back wall #2	<2	<2	<111
49006071	right wall #1	<3	<2	<111
49006072	right wall #2	<3	<2	<111
49006073	right wall #3	<2	<2	<111
49006074	left floor #1	<3	<2	<111
49006075	left floor #2	<2	<2	<111
49006076	right floor #1	<3	<2	<111
49006077	right floor #2	<3	<3	<111
49006078	* #1 S wall	<3	<2	<111
49006079	* #2 E wall	<2	<4	<111
49006080	* #3 ceiling	<3	<3	<111
49006081	* #4 N wall	<2	<2	<111
49006156	HVAC #1550	<2	<4	<111
49006157	HVAC #1551	<3	<2	<111

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Room #151

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006145	left wall #1	<2	<2	<111
49006146	left wall #2	<3	<2	<111
49006147	left wall #3	<2	<2	<111
49006148	back wall #1	<3	<2	<111
49006149	right wall #1	<3	<2	<111
49006150	right wall #2	<3	<2	<111
49006151	right wall #3	<2	<2	<111
49006152	left floor #1	<2	<2	<111
49006153	left floor #2	<2	<2	<111
49006154	right floor #1	<3	<2	<111
49006155	right floor #2	<3	<2	<111
49006163	HVAC center	<2	<2	<111
49006164	HVAC S-E	<2	<2	<111

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Room #188A

<u>AFOEHL ID #</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005924	left wall #1	<3	<2	<111
49005925	left wall #2	<2	<4	<111
49005926	back wall #1	<3	<2	<111
49005927	back wall #2	<3	<2	<111
49005928	right wall #1	<3	<2	<111
49005929	right wall #2	<2	<2	<111
49005930	right wall #3	<3	<2	<111
49005931	left floor #1	<2	<2	<111
49005932	left floor #2	<3	<2	<111
49005933	right floor #1	<2	<2	<111
49005934	right floor #2	<3	<2	<111
49006182	HVAC #1576	<2	<2	<111
49006183	HVAC #1577	<3	<2	<111
49006184	HVAC #1578	<2	<2	<111
49006185	HVAC #1579	<3	<2	<111
49006186	HVAC #1580	<2	<2	<111
49006253	cabinet outline right #1	<3	4 +/-2	<111
49006254	cabinet outline right #2	<2	<2	<111

Room #138A(cont)

<u>AFOEHL ID #</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006255	cabinet outline left #1	<2	<2	<111
49006256	cabinet outline left #2	<3	<2	<111
49006270	Industrial waste sink/drain	<3	<2	<111

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Room #174A

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005742	left wall #1	<1	<1	<111
49005743	left wall #2	<3	<1	<111
49005744	left wall #3	<3	<1	<111
49005745	left wall #4	<1	<1	<111
49005746	back wall #1	<2	<2	<111
49005747	back wall #2	<3	<2	<111
49005748	back wall #3	<3	<2	<111
49005749	back wall #4	<2	<4	<111
49005750	right wall #1	<2	<1	<111
49005751	right wall #2	<3	<1	<111
49005752	right wall #3	<1	<1	<111
49005753	right wall #4	<1	<3	<111
49005754	left floor #1	<1	<2	<111
49005755	left floor #2	<4	6 +/-3	<111
49005756	left floor #3	<3	<2	<111
49005757	left floor #4	<1	<2	<111
49005758	left floor #5	<2	<4	<111
49005759	left floor #6	<1	<2	<111

Room #174A(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005760	right floor #1	<1	<2	<111
49005761	right floor #2	<2	4 +/-2	<111
49005762	right floor #3	<3	<2	<111
49005763	right floor #4	<3	<3	<111
49005764	right floor #5	<2	3 +/-2	<111
49005765	right floor #6	<3	<3	<111
49006171	HVAC #1565	3 +/-2	3 +/-2	<111
49006172	HVAC #1566	<2	4 +/-3	<111
49006173	HVAC #1567	<2	5 +/-3	<111
49006174	HVAC #1568	<2	5 +/-3	<111
49006175	HVAC #1569	<3	3 +/-2	<111
49006176	air input #1570	<3	3 +/-2	<111
49006177	air input #1571	<2	<2	<111
49006178	air input #1572	<2	<3	<111

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Room #136C3

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID #</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005846	cabinet #1 wall	3 +/-3	4 +/-3	<111
49005847	cabinet #2 wall	<2	<4	<111
49005848	cabinet #1 floor	<3	<2	<111
49005849	cabinet #2 floor	<2	<4	<111
49005850	left wall #1	<3	<2	<111
49005851	table top #1	<2	<2	<111
49005852	table top #3	<3	<2	<111
49005853	back wall #1	<3	<2	<111
49005854	back wall #2	<3	<2	<111
49005855	floor #1	<3	<2	<111
49005856	floor #2	<2	<4	<111
49006264	Industrial waste sink/drain	<2	<2	<111

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Room #18

<u>AFOEHL ID #</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005777	* West wall	<1	<2	<111
49005778	floor drain #3 interior	<3	<2	<111
49005779	floor drain #3 grating	<1	<3	<111
49005780	left wall #1	<3	<2	<111
49005781	left wall #2	<1	<1	<111
49005782	left wall #3	<2	<2	<111
49005783	left wall #4	<2	<2	<111
49005784	left wall #5	<1	<1	<111
49005785	left wall #6	<3	<2	<111
49005786	left wall #7	<3	<2	<111
49005787	left wall #8	<3	<1	<111
49005788	left wall #9	<2	4 +/-3	<111
49005789	back wall #1	<3	<1	<111
49005790	window #1	<3	<1	<111
49005791	back wall #2	<3	<2	<111
49005792	right wall #1	<3	<2	<111
49005793	right wall #2	<1	<2	<111
49005794	right wall #3	<3	<4	<111
49005795	right wall #4	<3	<3	<111
49005796	right wall #5	<3	<3	<111

Room #18(cont.)

<u>AFOEHL ID #</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005797	floor #1	<1	<4	<111
49005798	floor #2	<2	<1	<111
49005799	floor #3	<3	<1	<111
49005800	floor #4	<3	<1	<111
49005801	floor #5	<1	<2	<111
49005802	floor #6	4 +/-3	6+/-3	<111
49005803	floor #7	<1	<1	<111
49005804	floor #8	<3	<1	<111
49005805	floor #9	<3	<1	<111
49005806	floor #10	<2	<3	<111
49005807	floor #11	<3	<1	<111
49005808	floor #12	<2	<3	<111
49005809	floor #13	<1	<2	<111
49005810	floor #14	<1	<3	<111
49005811	floor #15	<1	<3	<111
49005812	floor #16	<1	<2	<111
49005813	door	<2	<4	<111
49005814	* ceiling	<3	<1	<111
49006161	HVAC	<2	<2	<111
49006259	Industrial waste sink drain	<3	<2	<111
49006044	Industrial waste floor drain	<3	<2	<111

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Room #144A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005857	left wall #1	<2	<2	<111
49005858	left wall #2	<2	<4	<111
49005859	back wall #1	<3	<2	<111
49005860	back wall #2	<2	<3	<111
49005861	right wall #1	<2	<3	<111
49005862	right wall #2	<3	<2	<111
49005863	right wall #3	<2	<2	<111
49005864	floor #1	<2	<2	<111
49005865	floor #2	<3	<2	<111
49005866	floor #3	<2	<2	<111
49005867	floor #4	<3	<2	<111
49006225	HVAC #1619	<3	<2	<111
49006234	cabinet outline #1	<2	<2	<111
49006235	cabinet outline #2	<3	<2	<111
49006265	Industrial waste sink drain	<4	<2	<111

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Room #158

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005694	left wall #1	<3	<2	<111
49005695	left wall #2	<3	<2	<111
49005696	left wall #3	<2	<3	<111
49005697	left wall #4	<3	<2	<111
49005698	back wall #1	<3	<2	<111
49005699	back wall #2	<2	<2	<111
49005700	right wall #1	<2	<2	<111
49005701	right wall #2	<3	<2	<111
49005702	right wall #3	<2	<2	<111
49005703	right wall #4	<3	<2	<111
49005704	right floor #1	<3	<2	<111
49005705	right floor #2	<2	2 +/-2	<111
49005706	right floor #3	<3	<2	<111
49005707	left floor #1	<2	<4	<111
49005708	left floor #2	<3	<3	<111
49005709	left floor #3	<2	<3	<111
49006046	Industrial waste floor drain #5	<2	<4	<111
49006268	Industrial waste sink drain	<3	<4	<111

Room #158(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006047	HVAC	<3	<2	<111
49006236	cabinet outline #1 right	<3	<3	<111
49006237	cabinet outline #1 left	<3	<4	<111
49006238	cabinet outline #2 right	<3	<2	<111
49006919	cabinet outline #2 left	<4	<2	<111

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Room #191

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005670	left wall #1	<2	<2	<111
49005671	left wall #2	<2	<2	<111
49005672	left wall #3	<2	<2	<111
49005673	left wall #4	<2	<2	<111
49005674	left wall #5	<3	<2	<111
49005675	left wall #6	<3	<2	<111
49005676	back wall #1	<2	<2	<111
49005677	back wall #2	<3	<2	<111
49005678	back wall #3	<3	<2	<111
49005679	right wall #1	<3	<3	<111
49005680	right wall #2	<2	<2	<111
49005681	right wall #3	<3	<3	<111
49005682	right wall #4	<3	<3	<111
49005683	right wall #5	<3	<2	<111
49005684	right wall #6	<2	<2	<111
49005685	right wall #7	<3	<2	<111
49006272	sink/drain	<3	<2	<111
49005686	left floor #1	<2	<4	<111
49005687	left floor #2	<2	<2	<111
49005688	left floor #3	<2	6+/-3	<111

Room #191(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005689	left floor #4	<2	<2	<111
49005690	right floor #1	<3	<2	<111
49005691	right floor #2	<3	<2	<111
49005692	right floor #3	<2	<2	<111
49005693	right floor #4	<3	2+/-2	<111

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Room #171

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005886	right wall #1	<3	<2	<111
49005887	right wall #2	<2	<2	<111
49005388	right wall #3	<3	<2	<111
49005889	back wall #1	<2	<2	<111
49005890	back wall #2	<3	<2	<111
49005891	back wall #3	<2	<2	<111
49005892	left wall #1	<5	5 +/- 3	<111
49005893	cabinet #1 top	<2	<2	<111
49005894	cabinet #1 side	<3	<2	<111
49005895	cabinet #2 top	<3	<2	<111
49005896	cabinet #2 side	<2	<2	<111
49005897	left wall #2	<2	<2	<111
49005898	left wall #3	<3	3 +/- 2	<111
49005899	left floor #1	<2	<2	<111
49005900	left floor #2	<3	<3	<111
49005901	right floor #1	<3	<2	<111
49005902	right floor #2	<2	<3	<111
49006021	cabinet #1 floor	<3	<2	<111
49006022	cabinet #1 wall	<3	<2	<111

Room #171(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006023	cabinet #2 floor	<3	<2	<111
49006024	cabinet #2 wall	<2	<3	<111
49006269	industrial waste sink	<2	<2	<111

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Room #132A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005824	left wall #1	<3	<1	<111
49005825	left wall #2	<3	<2	<111
49005826	left wall #3	<3	<1	<111
49005827	back wall #1	<1	<1	<111
49005828	right wall #1	<3	<3	<111
49005829	right wall #2	<3	<2	<111
49005830	right wall #3	<3	<2	<111
49005831	left floor #1	<3	2 +/- 2	<111
49005832	left floor #2	<2	<2	<111
49005833	right floor #1	<2	<2	<111
49005834	right floor #2	<3	<2	<111
49006226	HVAC #1620	<3	<2	<111
49006227	HVAC #1621	<2	<2	<111
49006247	cabinet outline #1	<3	<3	<111
49006248	cabinet outline #2	<3	<2	<111

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Room #136C2

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005835	cabinet #1 wall	<3	<2	<111
49005836	cabinet #2 wall	<3	<2	<111
49005837	cabinet #1 floor	<2	<2	<111
49005838	cabinet #2 floor	<3	<2	<111
49005839	left window #1	<2	<2	<111
49005840	table top #1	<3	<2	<111
49005841	table top #3	<3	<2	<111
49005842	back wall #1	<3	<3	<111
49005843	back wall #2	<2	<4	<111
49005844	floor #1	<3	<2	<111
49005845	floor #2	<3	<2	<111
49006263	industrial waste sink/drain	<2	<2	<111

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Room #181

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005903	left wall #1	<3	3 +/- 2	<111
49005904	left wall #2	<3	<2	<111
49005905	left wall #3	<3	<2	<111
49005906	back wall #1	<2	<3	<111
49005907	back wall #2	<2	<2	<111
49006918	right wall #1	<3	<2	<111
49005909	right wall #2	<2	<4	<111
49005910	right wall #3	<2	<4	<111
49005911	cabinet #1 floor	<3	<2	<111
49005912	cabinet #1 wall	<2	<2	<111
49005913	cabinet #2 floor	<3	<2	<111
49005914	cabinet #2 wall	<2	<4	<111
49005915	left floor #1	<3	<2	<111
49005916	left floor #2	<2	<2	<111
49005917	left floor #3	<2	<2	<111
49005918	left floor #4	<3	<2	<111
49005919	right floor #1	<2	<4	<111
49005920	right floor #2	<2	<3	<111
49005921	right floor #3	<2	<2	<111
49005922	right floor #4	<3	4 +/- 2	<111

Room #181(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005923	sink	<2	<2	<111

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Room #190A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005731	left wall #1	<3	<3	<111
49005732	left wall #2	<3	<2	<111
49005733	left wall #3	<2	<2	<111
49005734	back wall #1	<3	<2	<111
49005735	back wall #2	6+/-4	7+/-3	<111
49005736	right wall #1	<3	<2	<111
49005737	right wall #2	<1	<2	<111
49005738	left floor #1	<2	<2	<111
49005739	left floor #2	<1	<1	<111
49005740	right floor #1	<1	<2	<111
49005741	right floor #2	<3	<3	<111
49006187	HVAC #1581	<3	<2	<111
49006188	HVAC #1582	<3	<2	<111
49006189	HVAC #1583	<3	<2	<111
49006190	HVAC #1584	<2	<2	<111
49006257	cabinet outline #1	4 +/- 3	6 +/- 3	<111
49006258	cabinet outline #2	<2	<2	<111
49006271	industrial waste sink/drain	<3	<2	<111

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Room #150B

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006108	left wall #1	<2	<2	<111
49006109	left wall #2	<2	<3	<111
49006110	right wall #1	<2	<4	<111
49006111	right wall #2	<3	<2	<111
49006112	right wall #3	<2	<2	<111
49006113	right wall #4	<2	<3	<111
49006114	back wall #1	<4	<5	<111
49006115	back wall #2	<2	<2	<111
49006116	back wall #3	<2	<2	<111
49006117	floor #1	<2	<2	<111
49006118	floor #2	<3	<2	<111
49006119	floor #3	<3	<2	<111
49006120	ceiling #1	<3	<2	<111
49006121	ceiling #2	<2	<2	<111
49006122	ceiling #3	<2	<2	<111
49006123	ceiling #4	<3	<2	<111
49006124	ceiling #5	<2	<2	<111
49006125	ceiling #6	<3	<2	<111
49006126	ceiling #7	<2	<3	<111
49006127	ceiling #8	<2	<2	<111

Room #150B(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006128	ceiling #9	<3	<2	<111
49006129	ceiling #10	<2	<2	<111
49006130	ceiling #11	<2	<2	<111
49006131	ceiling #12	<3	<2	<111
49006132	*N. wall	<3	<2	<111
49006133	*ceiling	<2	2 +/- 2	<111
49006159	air vent east	<2	<2	<111
49006160	air vent west	<2	<3	<111
49006230	cabinet outline cleanout #1	<3	<2	<111
49006231	cabinet outline cleanout #2	<2	<2	<111
49006266	industrial sink drain	<3	<2	<111
49006041	industrial waste cleanout #8	<2	<2	<111

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Room #192B

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006048	left wall #1	<2	<2	<111
49006049	left wall #2	<2	<2	<111
49006050	back wall #1	<2	<2	<111
49006051	back wall #2	<2	<2	<111
49006052	cabinet floor #1	<3	<2	<111
49006053	cabinet floor #2	<3	<2	<111
49006054	cabinet wall #1	<2	<2	<111
49006055	cabinet wall #2	<3	<3	<111
49006056	right wall #1	<3	<3	<111
49006057	right wall #2	<2	<2	<111
49006058	right wall #3	<3	<3	<111
49006059	left floor #1	<2	<2	<111
49006060	left floor #2	<3	<2	<111
49006061	right floor #1	<2	<2	<111
49006062	right floor #2	<2	<2	<111
49006063	16 *left #1	<3	<2	<111
49006064	19 *left #1	<3	<2	<111
49006065	10 *right #2	<2	<2	<111
49006273	industrial waste sink/drain	<2	<2	<111

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Room #150E

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006045	industrial waste floor drain #4	<3	<2	<111
49006082	left wall #1	<3	<2	<111
49006083	left wall #2	<2	<3	<111
49006084	back wall #1	<3	<2	<111
49006085	back wall #2	<3	<2	<111
49006086	right wall #1	<3	<2	<111
49006087	right wall #2	<3	<4	<111
49006088	right wall #3	<3	<3	<111
49006089	left floor #1	<2	<2	<111
49006090	left floor #2	<3	<2	<111
49006091	right floor #1	<3	<2	<111
49006092	*N. wall	<3	<2	<111
49006093	*ceiling	<2	<3	<111
49006094	*S. wall	<3	<2	<111

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Room #151A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006134	left wall #1	<3	<2	<111
49006135	left wall #2	<2	<2	<111
49006136	left wall #3	<2	<2	<111
49006137	back wall #1	<3	<2	<111
49006138	right wall #1	<2	<2	<111
49006139	right wall #2	<3	<2	<111
49006140	right wall #3	<2	<2	<111
49006141	left floor #1	<3	<2	<111
49006142	left floor #2	<3	<2	<111
49006143	right floor #1	<3	<3	<111
49006144	right floor #2	<2	<2	<111
49006162	HVAC	<3	<2	<111
49006240	cabinet outline #2 right	<3	<2	<111
49006241	cabinet outline #1 right	<3	<2	<111
49006242	cabinet outline #1 left	<2	<3	<111
49006243	cabinet outline #2 left	<2	<2	<111
49006267	industrial waste sink drain	<3	<2	<111
49006040	industrial waste clean out	<2	<4	<111

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Room #179A

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005766	left wall #1	<1	<3	<111
49005767	left wall #2	<3	<3	<111
49005768	left wall #3	<2	<1	<111
49005769	back wall #1	<2	<1	<111
49005770	back wall #2	<3	<1	<111
49005771	right wall #1	<3	<2	<111
49005772	right wall #2	<3	<1	<111
49005773	left floor #1	<2	<1	<111
49005774	left floor #2	<3	<2	<111
49005775	right floor #1	<3	<3	<111
49005776	right floor #2	<1	4 +/- 3	<111
49006179	HVAC #1573	<2	<2	<111
49006180	HVAC #1574	5 +/- 3	7 +/- 3	<111
49006181	HVAC air input(#1575)	<2	<4	<111
49006251	cabinet outline #1	<2	<2	<111
49006252	cabinet outline #2	<3	<2	<111

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Room #159

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005710	left wall #1	<2	<2	<111
49005711	left wall #2	<2	<2	<111
49005712	left wall #3	<3	<2	<111
49005713	left wall #4	<2	<2	<111
49005714	left wall #5	<3	<2	<111
49005715	left wall #6	<3	<2	<111
49005716	left wall #7	<3	<2	<111
49005717	back wall #1	<3	<2	<111
49005718	back wall #2	<2	<2	<111
49005719	back wall #3	<2	<2	<111
49005720	right wall #1	<3	<2	<111
49005721	right wall #2	<3	<2	<111
49005722	right wall #3	<3	<2	<111
49005723	right wall #4	<3	<3	<111
49005724	left floor #1	<2	<4	<111
49005725	left floor #2	<3	<2	<111
49005726	left floor #3	<2	<2	<111
49005727	left floor #4	<3	<4	<111
49006166	HVAC #1560	<3	<3	<111
49006167	HVAC #1561	<2	<3	<111

Room #159(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006168	HVAC #1562	<3	<2	<111
49005728	right floor #1	<2	<2	<111
49005729	right floor #2	<3	<2	<111
49005730	right floor #3	<2	<2	<111

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Room #191

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005670	left wall #1	<2	<2	<111
49005671	left wall #2	<2	<2	<111
49005672	left wall #3	<2	<2	<111
49005673	left wall #4	<2	<2	<111
49005674	left wall #5	<3	<2	<111
49005675	left wall #6	<3	<2	<111
49005676	back wall #1	<2	<2	<111
49005677	back wall #2	<3	<2	<111
49005678	back wall #3	<3	<2	<111
49005679	right wall #1	<3	<3	<111
49005680	right wall #2	<2	<2	<111
49005681	right wall #3	<3	<3	<111
49005682	right wall #4	<3	<3	<111
49005683	right wall #5	<3	<2	<111
49005684	right wall #6	<2	<2	<111
49005685	right wall #7	<3	<2	<111
49006272	sink/drain	<3	<2	<111
49005686	left floor #1	<2	<4	<111
49005687	left floor #2	<2	<2	<111
49005688	left floor #3	<2	6+/-3	<111

Room #191(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005689	left floor #4	<2	<2	<111
49005690	right floor #1	<3	<2	<111
49005691	right floor #2	<3	<2	<111
49005692	right floor #3	<2	<2	<111
49005693	right floor #4	<3	2+/-2	<111

McClellan AFB Bldg 628

Room #158

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005694	left wall #1	<3	<2	<111
49005695	left wall #2	<3	<2	<111
49005696	left wall #3	<2	<3	<111
49005697	left wall #4	<3	<2	<111
49005698	back wall #1	<3	<2	<111
49005699	back wall #2	<2	<2	<111
49005700	right wall #1	<2	<2	<111
49005701	right wall #2	<3	<2	<111
49005702	right wall #3	<2	<2	<111
49005703	right wall #4	<3	<2	<111
49005704	right floor #1	<3	<2	<111
49005705	right floor #2	<2	2 +/-2	<111
49005706	right floor #3	<3	<2	<111
49005707	left floor #1	<2	<4	<111
49005708	left floor #2	<3	<3	<111
49005709	left floor #3	<2	<3	<111
49006046	Industrial waste floor drain #5	<2	<4	<111
49006268	Industrial waste sink drain	<3	<4	<111

Room #158(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006047	HVAC	<3	<2	<111
49006236	cabinet outline #1 right	<3	<3	<111
49006237	cabinet outline #1 left	<3	<4	<111
49006238	cabinet outline #2 right	<3	<2	<111
49006919	cabinet outline #2 left	<4	<2	<111

McClellan AFB Bldg. 628

Room #150C

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006095	right wall #1	<3	<2	<111
49006096	right wall #2	<3	<3	<111
49006097	back wall #1	<3	<2	<111
49006098	back wall #2	<3	<3	<111
49006099	left wall #1	<3	<2	<111
49006100	left wall #2	<3	<3	<111
49006101	left wall #3	<3	<2	<111
49006102	left floor #1	<3	<2	<111
49006103	right floor #1	7 +/- 4	4 +/- 3	<111
49006104	left ceiling #1	<2	<3	<111
49006105	left ceiling #2	<3	<2	<111
49006106	right ceiling #1	<2	<2	<111
49006107	right ceiling #2	<2	<2	<111
49006158	HVAC	<2	<4	<111
49006232	cabinet outline #2	<3	<2	<111
49006233	cabinet outline #1	<3	<2	<111

MCClellan AFB Bldg 628

Room #162

Gross Activity in dpm/100 cm<sup>2</sup>

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49005868	left wall #1	<2	<2	<111
49005869	left wall #2	<2	<2	<111
49005870	left wall #3	<2	<4	<111
49005871	back wall #1	<2	<4	<111
49005872	back wall #2	<2	<3	<111
49005873	right wall #1	<2	<2	<111
49005874	right wall #2	<3	<2	<111
49005875	right wall #3	<2	<2	<111
49005876	center wall left #1	<3	<2	<111
49005877	center wall left #2	<3	<2	<111
49005878	center wall right #1	<3	<2	<111
49005879	center wall right #2	<2	<2	<111
49005880	left floor #1	<3	2 +/-2	<111
49005881	left floor #2	<3	<2	<111
49005882	left floor #3	<3	<2	<111
49005883	right floor #1	<2	<3	<111
49005884	right floor #2	<3	<2	<111
49005885	right floor #3	<3	<1	<111

Room #162(cont.)

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	Gross Activity in dpm/100 cm <sup>2</sup>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49006047	Industrial waste floor drain #6	<2	<2	<111
49006260	S industrial waste sink/hood drain	<3	<3	<111
49006261	N industrial waste sink/hood drain	<2	<2	<111
49006244	left cabinet outline #1	<2	<2	<111
49006245	left cabinet outline #2	<3	<2	<111
49006246	right cabinet outline #1	<3	<2	<111
49006249	right cabinet outline #1	<3	<2	<111
49006250	right cabinet outline #2	<2	<3	<111
49006169	HVAC-N #1563	<2	<2	<111
49006170	HVAC-S #1564	<3	<3	<111

**APPENDIX F**  
**Soil Sample Results**

SOIL SAMPLES  
BACKGROUND MEASUREMENTS

<u>Sample Number</u>	<u>Area</u>	<u>AFTAC Number</u>
19000644	'C' Bay	0268
19000645	Outside	0269
19000646	Outside	0270
19000647	Southeast End of Flightline	0271
19000648	Outside	0272
19000649	Outside	0273
19000650	Outside	0274
19000651	Outside	0275
19000652	Outside	0276
19000653	Outside	0277

	<u>Avg. Background (pCi/g)</u>	<u>SD</u>	<u>Min.</u>	<u>Max.</u>
Barium 140	8.9 $\pm$ 7.5	0*		
Cesium 134	not available			
Cesium 137	0.061 $\pm$ 0.016	0.041	0.015 $\pm$ 0.01	0.12 $\pm$ 0.02
Chromium 51	not available			
Cobalt 60	0.027 $\pm$ 0.016	0*		
Gross Alpha	13 $\pm$ 5.8	3.9	7.8 $\pm$ 4.9	22 $\pm$ 6.5
Gross Beta	12 $\pm$ 0.96	2.3	6.1 $\pm$ 0.7	14 $\pm$ 1
Lanthium 140	164 $\pm$ 150	212	14.4 $\pm$ 7.7	314 $\pm$ 150
Niobium 95	not available			
Potassium 40	6.3 $\pm$ 0.4	0*		
Ruthenium 103	0.17 $\pm$ 0.17	0.042	0.2 $\pm$ 0.13	0.14 $\pm$ 0.11
Ruthenium 106	0.14 $\pm$ 0.21	0.045	0.09 $\pm$ 0.09	0.18 $\pm$ 0.14
Uranium 238	1.3 $\pm$ 0.4	0*		
Zirconium 95	not available			

\* Only one background sample available. Results listed as "not available" were all lower than detectable levels.

SOIL SAMPLES  
FIELD MEASUREMENT LOCATIONS

<u>Sample Number</u>	<u>Site</u>	<u>Area</u>	<u>Depth(ft)</u>	<u>AFTAC Number</u>
19000594	Outside Bldg. 628	Exterior Bore Hole	5	B-1
19000595	Outside Bldg. 628	Exterior Bore Hole	10	B-1
19000596	Outside Bldg. 628	Exterior Bore Hole	5	B-2
19000597	Outside Bldg. 628	Exterior Bore Hole	10	B-2
19000598	Outside Bldg. 628	Exterior Bore Hole	5	B-3
19000599	Outside Bldg. 628	Exterior Bore Hole	10	B-3
19000600	Outside Bldg. 628	Exterior Bore Hole	5	B-4
19000601	Outside Bldg. 628	Exterior Bore Hole	10	B-4
19000602	Outside Bldg. 628	Exterior Bore Hole	5	B-5
19000603	Outside Bldg. 628	Exterior Bore Hole	10	B-5
19000604	Outside Bldg. 628	Exterior Bore Hole	5	B-6
19000605	Outside Bldg. 628	Exterior Bore Hole	10	B-6
19000606	Outside Bldg. 628	Exterior Bore Hole	5	B-8
19000607	Outside Bldg. 628	Exterior Bore Hole	10	B-8
19000608	Outside Bldg. 628	Exterior Bore Hole	5	B-9
19000609	Outside Bldg. 628	Exterior Bore Hole	10	B-9
19000610	Outside Bldg. 628	Exterior Bore Hole	80	B-10
19000611	Outside Bldg. 628	Exterior Bore Hole	85	B-10
19000612	Outside Bldg. 628	Exterior Bore Hole	90	B-10
19000613	Outside Bldg. 628	Exterior Bore Hole	80	B-11
19000614	Outside Bldg. 628	Exterior Bore Hole	85	B-11
19000615	Outside Bldg. 628	Exterior Bore Hole	90	B-11
19000616	Outside Bldg. 628	Exterior Bore Hole	5	B-12
19000617	Outside Bldg. 628	Exterior Bore Hole	10	B-12
19000618	Outside Bldg. 628	Exterior Bore Hole	80	B-12

19000619	Outside Bldg. 628	Exterior Bore Hole	85	B-12
19000620	Outside Bldg. 628	Exterior Bore Hole	90	B-12
19000621	Outside Bldg. 628	Exterior Bore Hole	85	B-13
19000622	Outside Bldg. 628	Exterior Bore Hole	90	B-13
19000623	Outside Bldg. 628	Exterior Bore Hole	80	B-14
19000624	Outside Bldg. 628	Exterior Bore Hole	85	B-14
19000625	Outside Bldg. 628	Exterior Bore Hole	90	B-14
19000626	Outside Bldg. 628	Exterior Bore Hole	80	B-15
19000627	Outside Bldg. 628	Exterior Bore Hole	85	B-15
19000628	Outside Bldg. 628	Exterior Bore Hole	90	B-15
19000629	Inside Bldg. 628	Interior Bore Hole	1-3	S-1
19000630	Inside Bldg. 628	Interior Bore Hole	1-3	S-5
19000631	Inside Bldg. 628	Interior Bore Hole	1-3	S-13
19000632	Inside Bldg. 628	Interior Bore Hole	1-3	S-19
19000633	Inside Bldg. 628	Interior Bore Hole	1-3	S-24
19000634	Inside Bldg. 628	Interior Bore Hole	3-6	S-1
19000635	Inside Bldg. 628	Interior Bore Hole	3-6	S-5
19000636	Inside Bldg. 628	Interior Bore Hole	3-6	S-13
19000637	Inside Bldg. 628	Interior Bore Hole	3-6	S-19
19000638	Inside Bldg. 628	Interior Bore Hole	3-6	S-24
19000639	Radioactive Waste Storage Area	Beneath Pavement Northeast Corner		
19000640	Radioactive Waste Storage Area	Beneath Pavement Northwest Corner		
19000641	Radioactive Waste Storage Area	Beneath Pavement Southwest Corner		
19000642	Radioactive Waste Storage Area	Beneath Pavement Center		

19000643	Radioactive Waste Storage Area	Beneath Pavement Southeast Corner		
19000654	Basement Near Elevator	Interior Bore Hole	1-3	S-8
19000655	Basement Near Elevator	Interior Bore Hole	3-6	S-8

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000594

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901001  
OEHL ID: 19000594  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1045  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1178 GRAMS DRY

BARIUM 140	<	4.4	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.6	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.021	PICOCURIES PER GRAM DRIED
GROSS ALPHA	10.	+/- 5.2	PICOCURIES PER GRAM DRIED
GROSS BETA	13.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.4	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.12	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.071	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.18	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.13	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000595

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901002  
OEHL ID: 19000595  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1115  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1124 GRAMS DRY

BARIUM 140	<	6.8		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.009		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.1		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.017		PICOCURIES PER GRAM DRIED
GROSS ALPHA		7.	+/- 4.8	PICOCURIES PER GRAM DRIED
GROSS BETA		12.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.92		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.1		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.042		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.24	+/- 0.14	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000596

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901003  
OEHL ID: 19000596  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1230  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1031 GRAMS DRY

BARIUM 140	<	8.6	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.031	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.019	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.6	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.015	PICOCURIES PER GRAM DRIED
GROSS ALPHA	<	8.2	PICOCURIES PER GRAM DRIED
GROSS BETA		14. +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.7	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.16	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.061	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.18	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.15	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000597

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901004  
OEHL ID: 19000597  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1300  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1215 GRAMS DRY

BARIUM 140	<	4.3	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.025	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.014	PICOCURIES PER GRAM DRIED
GROSS ALPHA	10.	+/- 5.2	PICOCURIES PER GRAM DRIED
GROSS BETA	13.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.8	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.13	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.05	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.069	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000598

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901005  
OEHL ID: 19000598  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1345  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1273 GRAMS DRY

BARIUM 140	<	7.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024		PICOCURIES PER GRAM DRIED
CESIUM 137		0.024 +/-	0.015	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.013		PICOCURIES PER GRAM DRIED
GROSS ALPHA		12.	+/- 5.4	PICOCURIES PER GRAM DRIED
GROSS BETA		13.	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.32		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.093		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.052		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.14		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.11		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000599

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901006  
OEHL ID: 19000599  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1415  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1116 GRAMS DRY

BARIUM 140	<	6.3		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.032		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.6		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.021		PICOCURIES PER GRAM DRIED
GROSS ALPHA		17.	+/- 6.	PICOCURIES PER GRAM DRIED
GROSS BETA		12.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140		5.3	+/- 2.5	PICOCURIES PER GRAM DRIED
NIObIUM 95	<	0.12		PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.089	+/- 0.064	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.12		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
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BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000600

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901007  
OEHL ID: 19000600  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXK 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 16-MAY-90

SAMPLE WEIGHT 1029 GRAMS DRY

BARIUM 140	< 11.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.03	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.017	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.5	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.024	PICOCURIES PER GRAM DRIED
GROSS ALPHA	12. +/- 5.5	PICOCURIES PER GRAM DRIED
GROSS BETA	14. +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	6.2 +/- 2.6	PICOCURIES PER GRAM DRIED
NIObIUM 95	< 0.13	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	0.063 +/- 0.06	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.19 +/- 0.15	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.13	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000601

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

PASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901008  
OEHL ID: 19000601  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1545  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1001 GRAMS DRY

BARIUM 140	<	6.		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.032		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.013		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	2.4		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.024		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.	+/- 5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		13.	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	2.2		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.22		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.1		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.15	+/- 0.14	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.16		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000602

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901009  
OEHL ID: 19000602  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXK 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1630  
Date Received: 03-MAY-90  
Date Completed: 18-MAY-90

SAMPLE WEIGHT 1275 GRAMS DRY

BARIUM 140	< 12.		PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.03		PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.02		PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 0.014		PICOCURIES PER GRAM DRIED
COBALT 60	< 0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA	17.	+/- 6.	PICOCUPIES PER GRAM ASHED
GROSS BETA	13.	+/- 1.	PICOCURIES PER GRAM ASHED
LANTHANUM 140	22.	+/- 11.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.11		PICOCURIES PER GRAM DRIED
POTASSIUM 40	10.7	+/- 0.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.06		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.21	+/- 0.14	PICOCURIES PER GRAM DRIED
THORIUM 234	1.39	+/- 0.33	PICOCURIES PER GRAM DRIED
URANIUM 238	1.44	+/- 0.45	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.13		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000603

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901010  
OEHL ID: 19000603  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1645  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1066 GRAMS DRY

BARIUM 140	< 14.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.03	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.015	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 2.3	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.021	PICOCURIES PER GRAM DRIED
GROSS ALPHA	12. +/- 5.5	PICOCURIES PER GRAM DRIED
GROSS BETA	13. +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	12. +/- 4.1	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.17	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.11	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.14	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.14	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000604

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901011  
OEHL ID: 19000604  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1115  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1225 GRAMS DRY

BARIUM 140	<	9.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.02		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.02		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.5		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		14.	+/- 5.7	PICOCURIES PER GRAM DRIED
GROSS BETA		12.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140		24.8	+/- 12.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.12		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.03		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.12		PICOCURIES PER GRAM DRIED
THORIUM 234		1.37	+/- 0.44	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000605

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901012  
OEHL ID: 19000605  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1130  
Date Received: 03-MAY-90  
Date Completed: 18-MAY-90

SAMPLE WEIGHT 950 GRAMS DRY

BARIUM 140	<	9.2		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.03	+/- 0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.5		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.	+/- 5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		13.	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		17.6	+/- 12.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.11		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.05		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.33	+/- 0.14	PICOCURIES PER GRAM DRIED
THORIUM 234		1.3	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.5	+/- 0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.11		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000606

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901013  
OEHL ID: 19000606  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1315  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1210 GRAMS DRY

BARIUM 140	< 21.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.029	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 2.	PICOCURIES PER GRAM DRIED
COBALT 60	0.033 +/- 0.019	PICOCURIES PER GRAM DRIED
GROSS ALPHA	27. +/- 7.	PICOCURIES PER GRAM DRIED
GROSS BETA	13.2 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 2.8	PICOCURIES PER GRAM DRIED
NIOBIMUM 95	< 0.15	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.036	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.15	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000607

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901014  
OEHL ID: 19000607  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1400  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1237 GRAMS DRY

BARIUM 140	< 12.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.02	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.01	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.4	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.013	PICOCURIES PER GRAM DRIED
GROSS ALPHA	23.1 +/- 6.7	PICOCURIES PER GRAM DRIED
GROSS BETA	14.4 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 0.8	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.11	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.06	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.1	PICOCURIES PER GRAM DRIED
THORIUM 234	1.13 +/- 0.27	PICOCURIES PER GRAM DRIED
URANIUM 238	1.04 +/- 0.37	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.11	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000608

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901015  
OEHL ID: 19000608  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1500  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1250 GRAMS DRY

BARIUM 140	<	8.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.01		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.5		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		23.9	+/- 6.8	PICOCURIES PER GRAM DRIED
GROSS BETA		13.7	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		28.	+/- 11.	PICOCURIES PER GRAM DRIED
LEAD 214		0.43	+/- 0.04	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.15		PICOCURIES PER GRAM DRIED
RADIUM 226		0.73	+/- 0.26	PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.08	+/- 0.06	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.15		PICOCURIES PER GRAM DRIED
THORIUM 234		1.2	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.4	+/- 0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, E5C  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000609

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901016  
OEHL ID: 19000609  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-FEB-90 Time Collected: 1530  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1163 GRAMS DRY

BARIUM 140	<	4.8		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.011 +/-	0.009	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.5		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		27.3 +/-	7.1	PICOCURIES PER GRAM DRIED
GROSS BETA		13.4 +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		26. +/-	13.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.12		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.05		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.21 +/-	0.12	PICOCURIES PER GRAM DRIED
THORIUM 234		1.3 +/-	0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.3 +/-	0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.11		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL..

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000610

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901017  
OEHL ID: 19000610  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 12-FEB-90 Time Collected: 1430  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1279 GRAMS DRY

BARIUM 140	<	8.7	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.3	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.013	PICOCURIES PER GRAM DRIED
GROSS ALPHA		22.4 +/- 6.6	PICOCURIES PER GRAM DRIED
GROSS BETA		14.6 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.6	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.1	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.056	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.099	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

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AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000611

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901018  
OEHL ID: 19000611  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXK 845A MCCLELLAN AFB, CA  
Date Collected: 12-FEB-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1101 GRAMS DRY

BARIUM 140	< 11.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.025	PICOCURIES PER GRAM DRIED
CESIUM 137	< 7.3	FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.7	PICOCURIES PER GRAM DRIED
COBALT 60	0.018 +/- 0.017	PICOCURIES PER GRAM DRIED
GROSS ALPHA	22.8 +/- 6.7	PICOCURIES PER GRAM DRIED
GROSS BETA	14.4 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 1.6	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.11	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.055	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.12 +/- 0.11	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.12	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000612

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901019  
OEHL ID: 19000612  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 12-FEB-90 Time Collected: 1615  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1130 GRAMS DRY

BARIUM 140	<	6.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.02		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.1		PICOCURIES PER GRAM DRIED
COBALT 60		0.022 +/-	0.014	PICOCURIES PER GRAM DRIED
GROSS ALPHA		16.4 +/-	5.9	PICOCURIES PER GRAM DRIED
GROSS BETA		9.6 +/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.6		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.094		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.058		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.097		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.085		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000613

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q002530

IDENTIFICATION:

Base Sample #: GS901020  
OEHL ID: 19000613  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 14-FEB-90 Time Collected: 1415  
Date Received: 03-MAY-90  
Date Completed: 24-MAY-90

SAMPLE WEIGHT 1478 GRAMS DRY

BARIUM 140	<	7.2		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.019		PICOCURIES PER GRAM DRIED
CESIUM 137	<	8.4		FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.		PICOCURIES PER GRAM DRIED
COBALT 60		0.012 +/-	0.012	PICOCURIES PER GRAM DRIED
GROSS ALPHA		14.7 +/-	5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		13.2 +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.4		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.1		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.044		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.098		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.076		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000614

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901021  
OEHL ID: 19000614  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 14-FEB-90 Time Collected: 1530  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1453 GRAMS DRY

BARIUM 140	< 11.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.021	PICOCURIES PER GRAM DRIED
CESIUM 137	0.023 +/- 0.013	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.2	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.015	PICOCURIES PER GRAM DRIED
GROSS ALPHA	16. +/- 5.9	PICOCURIES PER GRAM DRIED
GROSS BETA	13.5 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 1.4	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.098	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.054	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.094	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.1	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 16-JUL-1991  
ARMSTRONG LABORATORY  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE  
RADIOANALYTICAL FUNCTION (OEBSA)  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

OE ID

19000615

TECH OPS DIV/DLS (AFTAC)  
MCCLELLAN AFB CA 95652-6437

BASE ADDRESS CODE: M00117C

IDENTIFICATION:

Base Sample #: GS901022  
OEHL ID: 19000615  
Type of Sample: SOIL  
Workplace or Site ID: 00117 RDXK 845A MCCLELLAN AFB, CA  
Date Collected: 14-FEB-90 Time Collected: 1630  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

AMERICIUM MDA: 31.28 FCI/GM  
URANIUM MDA: 6.67 FCI/GM  
SAMPLE WEIGHT 1366 GRAMS DRY  
CORRECTED REPORT.  
COPY TO DET 6/AL/RZC

AMERICIUM 241	<	31.28		FEMTOCURIES PER GRAM ASHED
BARIUM 140	<	6.5		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.021		PICOCURIES PER GRAM DRIED
CESIUM 137	<	5.		FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.1		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.013		PICOCURIES PER GRAM DRIED
GROSS ALPHA		10.4	+/- 6.	PICOCURIES PER GRAM DRIED
GROSS BETA		12.2	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.93		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.11		PICOCURIES PER GRAM DRIED
PLUTONIUM 239	<	2.7		FEMTOCURIES PER GRAM ASHED
RADIUM 226		0.73	+/- 0.43	PICOCURIES PER GRAM ASHED
RUTHENIUM 103	<	4.7		FEMTOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
THORIUM 228		13.1	+/- 0.4	PICOCURIES PER GRAM ASHED
THORIUM 232		0.4	+/- 0.07	PICOCURIES PER GRAM ASHED
URANIUM 234	<	6.67		FEMTOCURIES PER GRAM ASHED
URANIUM 235	<	48.8		FEMTOCURIES PER GRAM ASHED
URANIUM 238	<	6.67		FEMTOCURIES PER GRAM ASHED
ZIRCONIUM 95	<	0.084		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

MICHAEL D. MCKINNON, Maj, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000616

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901023  
OEHL ID: 19000616  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 07-FEB-90 Time Collected: 0900  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1060 GRAMS DRY

BARIUM 140	< 12.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.031	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.9	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.021	PICOCURIES PER GRAM DRIED
GROSS ALPHA	19.1 +/- 6.3	PICOCURIES PER GRAM DRIED
GROSS BETA	13.1 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 2.6	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.14	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.057	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.15 +/- 0.14	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.15	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000617

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901024  
OEHL ID: 19000617  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 07-FEB-90 Time Collected: 0915  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 912 GRAMS DRY

BARIUM 140	<	7.9		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.035		PICOCURIES PER GRAM DRIED
CESIUM 137		0.029 +/-	0.019	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	2.1		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		27.8 +/-	7.2	PICOCURIES PER GRAM DRIED
GROSS BETA		15.1 +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	2.8		PICOCURIES PER GRAM DRIED
NIOBium 95	<	0.23		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.075		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.16		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.18		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000618

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901025  
OEHL ID: 19000618  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 08-FEB-90 Time Collected: 1030  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE VOLUME 1350 GRAMS DRY

BARIUM 140	< 15.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.021	PICOCURIES PER GRAM DRIED
CESIUM 137	0.019 +/- 0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.5	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.01	PICOCURIES PER GRAM DRIED
GROSS ALPHA	13.8 +/- 5.6	PICOCURIES PER GRAM DRIED
GROSS BETA	11.7 +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 1.3	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.13	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.048	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.1 +/- 0.096	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.089	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000619

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CCDE: Q00253C

IDENTIFICATION:

Base Sample #: GS901026  
OEHL ID: 19000619  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 08-FEB-90 Time Collected: 1145  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1291 GRAMS DRY

BARIUM 140	< 13.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.026	PICOCURIES PER GRAM DRIED
CESIUM 137	0.025 +/- 0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.5	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.013	PICOCURIES PER GRAM DRIED
GROSS ALPHA	17.5 +/- 6.1	PICOCURIES PER GRAM DRIED
GROSS BETA	15.5 +/- 10.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 2.7	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.13	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.031	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.11	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.11	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000620

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901027  
OEHL ID: 19000620  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 645A MCCLELLAN AFB, CA  
Date Collected: 08-FEB-90 Time Collected: 1245  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1403 GRAMS DRY

BARIUM 140	< 11.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.019	PICOCURIES PER GRAM DRIED
CESIUM 137	8. +/- 7.5	FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.4	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.013	PICOCURIES PER GRAM DRIED
GROSS ALPHA	18.3 +/- 6.1	PICOCURIES PER GRAM DRIED
GROSS BETA	10.6 +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 1.2	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.096	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.049	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.074	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.1	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000621

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901028  
OEHL ID: 19000621  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXK 845A MCCLELLAN AFB, CA  
Date Collected: 20-FEB-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1121 GRAMS DRY

BARIUM 140	<	8.	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.027	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.014	PICOCURIES PER GRAM DRIED
GROSS ALPHA		20.7 +/- 6.4	PICOCURIES PER GRAM DRIED
GROSS BETA		14.5 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.2	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.12	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.053	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.084	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.087	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000622

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901029  
OEHL ID: 19000622  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 20-FEB-90 Time Collected: 1530  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1412 GRAMS DRY

BARIUM 140	<	4.4		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.017		PICOCURIES PER GRAM DRIED
CESIUM 137	<	6.2		FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.85		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.01		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.5	+/- 5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		8.7	+/- 0.8	PICOCURIES PER GRAM DRIED
LANTHANUM 140		1.8	+/- 1.2	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.075		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.048		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.085		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.063		PICOCURIES PER GRAM DRIED

RESULTS ACCUPATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000623

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901030  
OEHL ID: 19000623  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 21-FEB-90 Time Collected: 1445  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1193 GRAMS DRY

BARIUM 140	<	7.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.023		PICOCURIES PER GRAM DRIED
CESIUM 137		0.024 +/-	0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.3		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.015		PICOCURIES PER GRAM DRIED
GROSS ALPHA		13.7 +/-	5.7	PICOCURIES PER GRAM DRIED
GROSS BETA		12.4 +/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.94		PICOCURIES PER GRAM DRIED
NIObIUM 95	<	0.08		PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.076 +/-	0.046	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.13		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.094		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000624

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901031  
OEHL ID: 19000624  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 21-FEB-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1254 GRAMS DRY

BARIUM 140	<	7.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.018		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.9		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.015		PICOCURIES PER GRAM DRIED
GROSS ALPHA		11.4	+/- 5.3	PICOCURIES PER GRAM DRIED
GROSS BETA		8.7	+/- 0.8	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.82		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.099		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.034		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.096		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.081		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000625

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901032  
OEHL ID: 19000625  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 21-FEB-90 Time Collected: 1530  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 976 GRAMS DRY

BARIUM 140	< 6.7	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.025	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.4	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.013	PICOCURIES PER GRAM DRIED
GROSS ALPHA	24. +/- 6.8	PICOCURIES PER GRAM DRIED
GROSS BETA	15.9 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 0.34	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.093	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.05	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.11	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000626

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901033  
OEHL ID: 19000626  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1500  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1257 GRAMS DRY

BARIUM 140	<	4.7		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.019		PICOCURIES PER GRAM DRIED
CESIUM 137	<	9.9		FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.78		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.012		PICOCURIES PER GRAM DRIED
GROSS ALPHA		6.8	+/- 4.6	PICOCURIES PER GRAM DRIED
GROSS BETA		7.2	+/- 0.8	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.44		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.067		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.039		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.12	+/- 0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.08		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000627

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901034  
OEHL ID: 19000627  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1520  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1093 GRAMS DRY

BARIUM 140	<	3.2	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024	PICOCURIES PER GRAM DRIED
CESIUM 137	<	1.2	FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.91	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.016	PICOCURIES PER GRAM DRIED
GROSS ALPHA		24.7 +/- 6.9	PICOCURIES PER GRAM DRIED
GROSS BETA		15.6 +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.9	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.001	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.02	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.078	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 16-JUL-1991  
ARMSTRONG LABORATORY  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE  
RADIOANALYTICAL FUNCTION (OEBSA)  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

OE ID

19000628

TECH OPS DIV/DLS (AFTAC)  
MCCLELLAN AFB CA 95652-6437

BASE ADDRESS CODE: M00117C

IDENTIFICATION:

Base Sample #: GS901035  
OEHL ID: 19000628  
Type of Sample: SOIL  
Workplace or Site ID: 00117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1535  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

AMERICIUM MDA: 24.2 FCI/GM A  
AMERICIUM RECOVERY= 26.6%  
URANIUM MDA: 6.86 FCI/GM A  
SAMPLE WEIGHT 1257 GRAMS DRY

AMERICIUM 241	< 137.6		FEMTOCURIES PER GRAM ASHED
BARIUM 140	< 2.9		PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.021		PICOCURIES PER GRAM DRIED
CESIUM 137	0.017 +/-	0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 0.98		PICOCURIES PER GRAM DRIED
COBALT 60	< 0.014		PICOCURIES PER GRAM DRIED
GROSS ALPHA	< 8.1		PICOCURIES PER GRAM DRIED
GROSS BETA	14.8 +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	1.8 +/-	0.83	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.068		PICOCURIES PER GRAM DRIED
PLUTONIUM 239	7.2 +/-	3.5	FEMTOCURIES PER GRAM ASHED
RADIUM 226	0.52 +/-	0.38	PICOCURIES PER GRAM ASHED
RUTHENIUM 103	< 0.043		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.13		PICOCURIES PER GRAM DRIED
THORIUM 228	12.4 +/-	0.35	PICOCURIES PER GRAM ASHED
THORIUM 232	0.4 +/-	0.06	PICOCURIES PER GRAM ASHED
URANIUM 234	< 6.86		FEMTOCURIES PER GRAM ASHED
URANIUM 235	< 6.86		FEMTOCURIES PER GRAM ASHED
URANIUM 238	< 6.86		FEMTOCURIES PER GRAM ASHED
ZIRCONIUM 95	< 0.081		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

MICHAEL D. MCKINNON, Maj, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000629

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901036  
OEHL ID: 19000629  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-MAR-90 Time Collected: 1410  
Date Received: 03-MAY-90  
Date Completed: 01-JUN-90

SAMPLE WEIGHT 1248 GRAMS DRY

BARIUM 140	<	2.7		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024		PICOCURIES PER GRAM DRIED
CESIUM 137		0.022 +/-	0.013	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.016		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.	+/- 5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		13.2	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.27		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.069		PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.041 +/-	0.038	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.039		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.099		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000630

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901037  
OEHL ID: 19000630  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 17-FEB-90 Time Collected: 1145  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1278 GRAMS DRY

BARIUM 140	< 14.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.026	PICOCURIES PER GRAM DRIED
CESIUM 137	0.022 +/- 0.015	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.3	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.012	PICOCURIES PER GRAM DRIED
GROSS ALPHA	12.5 +/- 5.5	PICOCURIES PER GRAM DRIED
GROSS BETA	11.3 +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 1.1	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.1	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.051	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.12	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.096	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000631

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901038  
OEHL ID: 19000631  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 20-FEB-90 Time Collected: 1430  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1470 GRAMS DRY

BARIUM 140	<	8.5		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.022		PICOCURIES PER GRAM DRIED
CESIUM 137		0.028 +/-	0.013	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.79		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.014		PICOCURIES PER GRAM DRIED
GROSS ALPHA		19.2 +/-	6.2	PICOCURIES PER GRAM DRIED
GROSS BETA		12.2 +/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.093		PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.075 +/-	0.05	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.13		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.099		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000632

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901039  
OEHL ID: 19000632  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 0900  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1440 GRAMS DRY

BARIUM 140	<	3.4		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.022		PICOCURIES PER GRAM DRIED
CESIUM 137		0.018 +/-	0.012	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.82		PICOCURIES PER GRAM DRIED
COBALT 60	<	9.4		PICOCURIES PER GRAM DRIED
GROSS ALPHA		10.5 +/-	5.2	PICOCURIES PER GRAM DRIED
GROSS BETA		10.8 +/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.5		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.076		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.041		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.13		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.085		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000633

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901040  
OEHL ID: 19000633  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1330  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1356 GRAMS DRY

BARIUM 140	<	3.7		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.025		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.012		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.014		PICOCURIES PER GRAM DRIED
GROSS ALPHA		8.2	+/- 4.9	PICOCURIES PER GRAM DRIED
GROSS BETA		10.1	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.54		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.11		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.044		PICOCURIES PER GRAM DRIED
RUTHENIUM 106		0.17	+/- 0.095	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.093		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000634

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901041  
OEHL ID: 19000634  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 06-MAR-90 Time Collected: 1435  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1084 GRAMS DRY

BARIUM 140	<	4.8		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.025		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.016		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.91		PICOCURIES PER GRAM DRIED
COBALT 60		0.03	+/- 0.017	PICOCURIES PER GRAM DRIED
GROSS ALPHA		13.4	+/- 5.6	PICOCURIES PER GRAM DRIED
GROSS BETA		12.1	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.73		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.088		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.038		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.092		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000635

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901042  
OEHL ID: 19000635  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 17-FEB-90 Time Collected: 1215  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1169 GRAMS DRY

BARIUM 140	< 15.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.025	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.01	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.7	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.014	PICOCURIES PER GRAM DRIED
GROSS ALPHA	12.8 +/- 5.5	PICOCURIES PER GRAM DRIED
GROSS BETA	11.4 +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 0.92	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.11	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	0.14 +/- 0.069	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.3 +/- 0.13	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.12	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000636

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901043  
OEHL ID: 19000636  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-FEB-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1178 GRAMS DRY

BARIUM 140	< 10.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.026	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.01	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 2.	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.017	PICOCURIES PER GRAM DRIED
GROSS ALPHA	14.5 +/- 5.7	PICOCURIES PER GRAM DRIED
GROSS BETA	12. +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 2.6	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.16	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	0.081 +/- 0.08	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.16 +/- 0.15	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.14	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000637

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901044  
OEHL ID: 19000637  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1515  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1241 GRAMS DRY

BARIUM 140	<	3.9		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.022		PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.014		PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	0.92		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.014		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.9	+/- 5.9	PICOCURIES PER GRAM DRIED
GROSS BETA		11.5	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140		2.3	+/- 1.3	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.091		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.019		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.093		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000638

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901045  
OEHL ID: 19000638  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 05-MAR-90 Time Collected: 1415  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1380 GRAMS DRY

BARIUM 140	<	5.1	PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.024	PICOCURIES PER GRAM DRIED
CESIUM 137	<	0.011	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.	PICOCURIES PER GRAM DRIED
COBALT 60	<	0.016	PICOCURIES PER GRAM DRIED
GROSS ALPHA		17.5 +/- 6.1	PICOCURIES PER GRAM DRIED
GROSS BETA		12.4 +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	0.57	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.1	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.043	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.09	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.093	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000639

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901046  
OEHL ID: 19000639  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 02-MAR-90 Time Collected: 1300  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1592 GRAMS DRY

BARIUM 140	<	6.1		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.03	+/- 0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		20.	+/- 6.4	PICOCURIES PER GRAM DRIED
GROSS BETA		14.5	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		15.7	+/- 11.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.14		PICOCURIES PER GRAM DRIED
POTASSIUM 40		1.4	+/- 0.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.04		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.15		PICOCURIES PER GRAM DRIED
THORIUM 234		1.4	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.7	+/- 0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000640

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901047  
OEHL ID: 19000640  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-MAR-90 Time Collected: 1315  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1362 GRAMS DRY

BARIUM 140	<	0.56		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.05 +/-	0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.5		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.017		PICOCURIES PER GRAM DRIED
GROSS ALPHA		18. +/-	6.2	PICOCURIES PER GRAM DRIED
GROSS BETA		13.7 +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		17. +/-	11.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.14		PICOCURIES PER GRAM DRIED
POTASSIUM 40		12.2 +/-	0.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.09 +/-	0.07	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.12		PICOCURIES PER GRAM DRIED
THORIUM 234		1.4 +/-	0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.3 +/-	0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000641

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901048  
OEHL ID: 19000641  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-MAR-90 Time Collected: 1330  
Date Received: 03-MAY-90  
Date Completed: 11-JUN-90

SAMPLE WEIGHT 1232 GRAMS DRY

BARIUM 140	<	5.8		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.04	+/- 0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		16.7	+/- 6.	PICOCURIES PER GRAM DRIED
GROSS BETA		13.4	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		12.9	+/- 10.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.13		PICOCURIES PER GRAM DRIED
POTASSIUM 40		1.3	+/- 0.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.02		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.2		PICOCURIES PER GRAM DRIED
THORIUM 234		1.2	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.4	+/- 0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.11		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000642

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901049  
OEHL ID: 19000642  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-MAR-90 Time Collected: 1345  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1887 GRAMS DRY

BARIUM 140	<	6.		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.03	+/- 0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.3		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		11.	+/- 5.4	PICOCURIES PER GRAM DRIED
GROSS BETA		13.	+/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140		17.4	+/- 9.9	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.12		PICOCURIES PER GRAM DRIED
POTASSIUM 40		11.7	+/- 0.5	PICOCURIES PER GRAM DRIED
RADIUM 226		1.1	+/- 0.3	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.04		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.08		PICOCURIES PER GRAM DRIED
THORIUM 234		1.4	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.2	+/- 0.5	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000643

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901050  
OEHL ID: 19000643  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-MAR-90 Time Collected: 1400  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1678 GRAMS DRY

BARIUM 140	<	6.9		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.03		PICOCURIES PER GRAM DRIED
CESIUM 137		0.05	+/- 0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	1.4		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA		15.	+/- 5.8	PICOCURIES PER GRAM DRIED
GROSS BETA		11.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140		20.	+/- 10.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.1		PICOCURIES PER GRAM DRIED
POTASSIUM 40		10.8	+/- 0.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.02		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
THORIUM 234		1.5	+/- 0.3	PICOCURIES PER GRAM DRIED
URANIUM 238		1.4	+/- 0.5	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.11		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000644

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901051  
OEHL ID: 19000644  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 142 GRAMS DRY

BARIUM 140	< 47.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.24	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.18	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 45.	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.18	PICOCURIES PER GRAM DRIED
GROSS ALPHA	13. +/- 5.4	PICOCURIES PER GRAM DRIED
GROSS BETA	6.1 +/- 0.7	PICOCURIES PER GRAM DRIED
LANTHANUM 140	314. +/- 150.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 1.5	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.61	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 2.5	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 1.4	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000645

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901052  
OEHL ID: 19000645  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1221 GRAMS DRY

BARIUM 140	8.9	+/-	7.5	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.023			PICOCURIES PER GRAM DRIED
CESIUM 137	0.12	+/-	0.02	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.2			PICOCURIES PER GRAM DRIED
COBALT 60	< 0.013			PICOCURIES PER GRAM DRIED
GROSS ALPHA	11.	+/-	5.3	PICOCURIES PER GRAM DRIED
GROSS BETA	11.	+/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	14.4	+/-	7.7	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.08			PICOCURIES PER GRAM DRIED
POTASSIUM 40	6.3	+/-	0.4	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.04			PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.09	+/-	0.09	PICOCURIES PER GRAM DRIED
URANIUM 238	1.3	+/-	0.4	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.1			PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000646

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901053  
OEHL ID: 19000646  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1583 GRAMS DRY

BARIUM 140	<	2.6		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.021		PICOCURIES PER GRAM DRIED
CESIUM 137		0.014 +/-	0.011	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	2.6		PICOCURIES PER GRAM DRIED
COBALT 60		0.027 +/-	0.016	PICOCURIES PER GRAM DRIED
GROSS ALPHA		7.8 +/-	4.9	PICOCURIES PER GRAM DRIED
GROSS BETA		19. +/-	0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	1.4		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.19		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.068		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.098		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.12		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000647

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901054  
OEHL ID: 19000647  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1516 GRAMS DRY

BARIUM 140	<	32.		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.023		PICOCURIES PER GRAM DRIED
CESIUM 137		0.079 +/-	0.017	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	3.		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.015		PICOCURIES PER GRAM DRIED
GROSS ALPHA		13.	+/- 5.6	PICOCURIES PER GRAM DRIED
GROSS BETA		12.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	6.4		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.21		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	<	0.087		PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.13		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000648

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901055  
OEHL ID: 19000648  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 19-JUN-90

SAMPLE WEIGHT 1551 GRAMS DRY

BARIUM 140	< 76.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.024	PICOCURIES PER GRAM DRIED
CESIUM 137	0.073 +/- 0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 3.	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.015	PICOCURIES PER GRAM DRIED
GROSS ALPHA	10. +/- 5.2	PICOCURIES PER GRAM DRIED
GROSS BETA	12. +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 6.3	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.17	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.093	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.11	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.15	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000649

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901056  
OEHL ID: 19000649  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1535 GRAMS DRY

BARIUM 140	< 58.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.021	PICOCURIES PER GRAM DRIED
CESIUM 137	0.015 +/- 0.01	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 2.7	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.011	PICOCURIES PER GRAM DRIED
GROSS ALPHA	22. +/- 6.5	PICOCURIES PER GRAM DRIED
GROSS BETA	12. +/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 3.3	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.21	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.067	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.093	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.12	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000650

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901057  
OEHL ID: 19000650  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1419 GRAMS DRY

BARIUM 140	< 72.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.023	PICOCURIES PER GRAM DRIED
CESIUM 137	0.045 +/- 0.016	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 3.	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.012	PICOCURIES PER GRAM DRIED
GROSS ALPHA	14. +/- 5.7	PICOCURIES PER GRAM DRIED
GROSS BETA	14. +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 8.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.23	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.12	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.18 +/- 0.14	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.15	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000651

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901058  
OEHL ID: 19000651  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1582 GRAMS DRY

BARIUM 140	<	54.		PICOCURIES PER GRAM DRIED
CESIUM 134	<	0.023		PICOCURIES PER GRAM DRIED
CESIUM 137		0.11 +/-	0.016	PICOCURIES PER GRAM DRIED
CHROMIUM 51	<	3.2		PICOCURIES PER GRAM DRIED
COBALT 60	<	0.016		PICOCURIES PER GRAM DRIED
GROSS ALPHA		16.	+/- 5.9	PICOCURIES PER GRAM DRIED
GROSS BETA		12.	+/- 0.9	PICOCURIES PER GRAM DRIED
LANTHANUM 140	<	4.5		PICOCURIES PER GRAM DRIED
NIOBIUM 95	<	0.19		PICOCURIES PER GRAM DRIED
RUTHENIUM 103		0.14 +/-	0.11	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	<	0.11		PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	<	0.15		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000652

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901059  
OEHL ID: 19000652  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1557 GRAMS DRY

BARIUM 140	< 84.		PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.024		PICOCURIES PER GRAM DRIED
CESIUM 137	0.035 +/-	0.014	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 3.2		PICOCURIES PER GRAM DRIED
COBALT 60	< 0.02		PICOCURIES PER GRAM DRIED
GROSS ALPHA	12. +/-	5.4	PICOCURIES PER GRAM DRIED
GROSS BETA	13. +/-	1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 13.		PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.25		PICOCURIES PER GRAM DRIED
RUTHENIUM 103	0.2 +/-	0.13	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	0.14 +/-	0.13	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.14		PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000653

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BASE ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901060  
OEHL ID: 19000653  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 02-FEB-90 Time Collected: 1200  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1502 GRAMS DRY

BARIUM 140	< 72.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.028	PICOCURIES PER GRAM DRIED
CESIUM 137	< 0.016	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 4.4	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.019	PICOCURIES PER GRAM DRIED
GROSS ALPHA	11. +/- 5.3	PICOCURIES PER GRAM DRIED
GROSS BETA	14. +/- 1.	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 10.	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.21	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	< 0.093	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.093	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.2	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 16-JUL-1991  
ARMSTRONG LABORATORY  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE  
RADIOANALYTICAL FUNCTION (OEBSA)  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

OE ID

19000654

TECH OPS DIV/DLS (AFTAC)  
MCCLELLAN AFB CA 95652-6437

BASE ADDRESS CODE: M00117C

IDENTIFICATION:

Base Sample #: GS901061  
OEHL ID: 19000654  
Type of Sample: SOIL  
Workplace or Site ID: 00117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 19-FEB-90 Time Collected: 1400  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

AMERICIUM MDA: 23.0 FCI/GM  
SAMPLE WEIGHT 1085 GRAMS DRY  
URANIUM MDA: 44.8 FCI/GM

AMERICIUM 241	0.25	+/-	0.17	PICOCURIES PER GRAM ASHED
BARIUM 140	< 28.			PICOCURIES PER GRAM DRIED
CESIUM 134	< 6.2			FEMTOCURIES PER GRAM DRIED
CESIUM 137	< 7.2			FEMTOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.4			PICOCURIES PER GRAM DRIED
COBALT 60	< 8.6			FEMTOCURIES PER GRAM DRIED
GROSS ALPHA	14.	+/-	5.9	PICOCURIES PER GRAM DRIED
GROSS BETA	20.5	+/-	1.1	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 6.			PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.055			PICOCURIES PER GRAM DRIED
PLUTONIUM 238	4.9	+/-	2.8	FEMTOCURIES PER GRAM ASHED
PLUTONIUM 239	7.7	+/-	3.8	FEMTOCURIES PER GRAM ASHED
RADIUM 226	0.45	+/-	0.36	PICOCURIES PER GRAM ASHED
RUTHENIUM 103	< 0.043			PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.058			PICOCURIES PER GRAM DRIED
THORIUM 228	13.4	+/-	0.4	PICOCURIES PER GRAM ASHED
THORIUM 232	0.6	+/-	0.08	PICOCURIES PER GRAM ASHED
URANIUM 234	< 44.8			FEMTOCURIES PER GRAM ASHED
URANIUM 235	< 44.8			FEMTOCURIES PER GRAM ASHED
URANIUM 238	< 44.8			FEMTOCURIES PER GRAM ASHED
ZIRCONIUM 95	< 0.039			PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

MICHAEL D. MCKINNON, Maj, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 11-JAN-1991  
USAF OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

OEHL ID

19000655

AFOEHL/RZC  
CONSULTANT SERVICES  
BROOKS AFB, TX 78235-5501

BAS<sup>E</sup> ADDRESS CODE: Q00253C

IDENTIFICATION:

Base Sample #: GS901062  
OEHL ID: 19000655  
Type of Sample: SOIL  
Workplace or Site ID: 0117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 19-FEB-90 Time Collected: 1445  
Date Received: 03-MAY-90  
Date Completed: 21-JUN-90

SAMPLE WEIGHT 1386 GRAMS DRY

BARIUM 140	< 41.	PICOCURIES PER GRAM DRIED
CESIUM 134	< 0.011	PICOCURIES PER GRAM DRIED
CESIUM 137	0.01 +/- 0.007	PICOCURIES PER GRAM DRIED
CHROMIUM 51	< 1.8	PICOCURIES PER GRAM DRIED
COBALT 60	< 0.011	PICOCURIES PER GRAM DRIED
GROSS ALPHA	15. +/- 5.9	PICOCURIES PER GRAM DRIED
GROSS BETA	17. +/- 1.1	PICOCURIES PER GRAM DRIED
LANTHANUM 140	< 2.8	PICOCURIES PER GRAM DRIED
NIOBIUM 95	< 0.075	PICOCURIES PER GRAM DRIED
RUTHENIUM 103	0.13 +/- 0.074	PICOCURIES PER GRAM DRIED
RUTHENIUM 106	< 0.029	PICOCURIES PER GRAM DRIED
ZIRCONIUM 95	< 0.064	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

Mark C. Wrobel, Capt, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

**APPENDIX G**  
**MISCELLANEOUS SAMPLES**

McClellan AFB Bldg 628

Miscellaneous Swipes

AFOEHL ID#	Swipe Location	Gross Activity in dpm 100/cm2		
		Alpha	Beta	Gamma
49006025	Industrial waste clean out #1 rm 156	<2	<2	<111
49006026	Industrial waste clean out #2 rm 102	<2	<2	<111
49006032	Industrial waste clean out #10 O/S rm 187	<2	<2	<111
49006034	Industrial waste clean out #12 rm B2	<2	<2	<111
49006038	Industrial waste clean out #16 rm 161	<2	<2	<111
49006259	cube 18 sink/hood	<3	<2	<111
49006260	rm162-s sink/hood	<3	<3	<111
49006261	rm162-n sink/hood	<2	<2	<111
49006262	rm136a sink drain	<3	<3	<111
49006263	rm136C2 sink drain	<2	<2	<111
49006264	rm136C3 sink drain	<2	<2	<111
49006265	rm144A sink drain	<2	<4	<111
49006266	rm150B sink drain	<3	<2	<111
49006267	rm151A sink drain	<3	<2	<111
49006268	rm158 sink drain	<3	<4	<111
49006269	rm171 sink drain	<2	<2	<111
49006270	rm188A sink drain	<3	<2	<111
49006271	rm189A sink drain	<3	<2	<111
49006272	rm191 sink drain	<3	<2	<111

49006273	rm192B sink drain	<2	<2	<111
49006359	rm132A sink drain	<3	<2	<111
49006360	rm174A sink drain	<3	<2	<111
49006361	rm179A sink drain	<3	<2	<111
49006362	rm181 sink drain	<3	<2	<111
49006363	rm141 sink trap	<1	<1	<111
49006364	rm168 sink trap	<1	<2	<111
49006365	rm232 sink trap center sink	<3	<3	<111
49006366	rm179 floor drain sw #1	<3	<2	<111
49006367	rm232 floor drain	<3	<3	<111
49006368	rm179 floor drain a-s #3	<1	<2	<111
49006369	rm178E floor drain #4	<3	<1	<111
49006370	rm145 floor drain #5	<2	3+/-2	<111
49006371	rm136A floor drain #6	<3	<3	<111
49006372	rm145 clean out #1	<3	<3	<111
49006373	rm179-N clean out #3	<1	<1	<111
49006374	rm174A-E clean out #4	<2	<1	<111
49006375	rm112-N clean out #5	<3	<2	<111
49006376	rm106N clean out #6	<1	<1	<111
49006377	rm173 N clean out #7	<3	<2	<111
49006378	rm159 clean out #3	<3	<2	<111
49006379	rm136F clean out#9	<3	<2	<111
49006380	rm231 clean out #10	<3	<2	<111

49100807	cube 4 ww-2 center	<2		
49100808	cube 4 c-7 right top	<2		
49100809	cube 15 c-10 center	<3		
49100810	cube 15 c-13 right bottom	<3		
49100811	cube 15 c-14 left bottom	<3		
49100812	cube 15 c-17 right top	<2		
49100813	cube 15 c-18 left top	<3		
49100814	cube 18 NW-4 center	<3		
49100815	cube 18 c-13 center	<3		
49100801	post decon cube 16	<2	<2	<111
49100802	breaker bar for scrabble	<1	<2	<111

SAMPLE ANALYSIS RESULTS REPORTED ON 14-JUN-1991  
ARMSTRONG LABORATORY  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE  
RADIOANALYTICAL FUNCTION (OEBSA)  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

OE ID

19001549

TECH OPS DIV/DLS (AFTAC)  
MCCLELLAN AFB CA 95652-6437

BASE ADDRESS CODE: M00117C

IDENTIFICATION:

Base Sample #: GM901733  
OEHL ID: 19001549  
Type of Sample: INDUSTRIAL MATERIAL  
Workplace or Site ID: 00117 RDXX 845A MCCLELLAN AFB, CA  
Date Collected: 17-FEB-90 Time Collected: 1400  
Date Received: 06-DEC-90  
Date Completed: 03-JUN-91

CESIUM 137	214.	+/-	10.7	PICOCURIES PER GRAM DRIED
GROSS ALPHA	< 5.42			PICOCURIES PER GRAM DRIED
GROSS BETA	800.6	+/-	6.6	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

MICHAEL D. MCKINNON, Maj, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

SAMPLE ANALYSIS RESULTS REPORTED ON 14-JUN-1991  
ARMSTRONG LABORATORY  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE  
RADIOANALYTICAL FUNCTION (OEBSA)  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

OE ID

19001540

TECH OPS DIV/DLS (AFTAC)  
MCCLELLAN AFB CA 95652-6437

BASE ADDRESS CODE: M00117C

IDENTIFICATION:

Base Sample #: GM901732  
OEHL ID: 19001540  
Type of Sample: INDUSTRIAL MATERIAL  
Workplace or Site ID: 00117 RDX 845A MCCLELLAN AFB, CA  
Date Collected: 04-SEP-90 Time Collected: 1400  
Date Received: 05-DEC-90  
Date Completed: 03-JUN-91

GAMMA QUANTITATIVE ANALYSIS USED A POINT FACE GEOMETRY  
ALPHA ANALYSIS WAS RUN TO QUANTIFY THE ALPHA ACTIVITY  
ONLY AFTER IDENTIFYING AM 241 AS THE PRIMARY ALPHA EMITTER  
THROUGH GAMMA SPEC

AMERICIUM 241	1.63	+/-	0.09	PICOCURIES PER GRAM DRIED
COBALT 57	0.04	+/-	0.005	PICOCURIES PER GRAM DRIED
GROSS ALPHA	11.3	+/-	4.9	PICOCURIES PER GRAM DRIED
GROSS BETA	6.4	+/-	0.9	PICOCURIES PER GRAM DRIED

RESULTS ACCURATE TO 2 SIGNIFICANT FIGURES.  
ERROR TERM AT 95% CONFIDENCE LEVEL.

MICHAEL D. MCKINNON, Maj, USAF, BSC  
Health Physicist  
AUTOVON 240-2061

**APPENDIX H**  
**INITIAL AFOEHL SURVEY**

McClellan AFB Bldg 628

Pre-Survey

<u>AFOEHL ID#</u>	<u>Swipe Location</u>	<u>Gross Activity in dpm/100 cm<sup>2</sup></u>		
		<u>Alpha</u>	<u>Beta</u>	<u>Gamma</u>
49000733	rm 108 entrance clean out	<2	<4	<111
49000734	rm 108 sink trap interior	<2	<4	<111
49000735	rm 108 toilet drain interior	<2	<4	<111
49000736	rm 110 drain interior	<2	<4	<111
49000737	rm 110 drain interior	<2	<4	<111
49000738	rm 110 t1 drain interior	<2	<4	<111
49000739	rm 110 t2 drain interior	<2	<4	<111
49000740	rm 110 t3 drain interior	<2	<4	<111
49000741	rm 110 t4 drain interior	<2	<4	<111
49000742	rm 110 s1 trap interior	<2	<4	<111
49000743	rm 110 s2 trap interior	<2	<4	<111
49000744	rm 110 s3 trap interior	<2	<4	<111
49000745	rm 110 s4 trap interior	<2	<4	<111
49000746	rm 210 u1 drain interior	<2	<4	<111

49000747	rm 210 u 2 drain interior	<2	<4	<111
49000748	room 210 t1 drain interior	<2	<4	<111
49000749	room 210 t2 drain interior	<2	<4	<111
49000750	room 210 t3 drain interior	<2	<4	<111
49000751	room 210 t4 drain interior	<2	<4	<111
49000752	room 210 s1 trap interior	<2	<4	<111
49000753	room 210 s2 trap interior	<2	<4	<111
49000754	room 210 s3 trap interior	<2	<4	<111
49000755	room 210 s4 trap interior	<2	<4	<111
49000756	rm 245 s1 trap interior	<2	<4	<111
49000757	rm 245 s2 trap interior	<2	<4	<111
49000758	rm 245 s3 trap interior	<2	<4	<111
49000759	rm 245 u1 trap interior	<2	<4	<111
49000760	rm 245 u2 trap interior	<2	<2	<111
49000761	rm 245 t1 drain interior	2+/-2	4+/-2	<111
49000762	rm 245 t2 drain interior	<2	<4	<111
49000763	rm 246 s1 trap/pipe outer surface	<2	<4	<111
49000764	rm 246 s2 trap interior	<2	<4	<111

49000765	rm 246 t1 drain interior	<2	<4	<111
49000766	rm 246 t2 drain interior	<2	<4	<111
49000767	rm 232 u1 drain	<2	<4	<111
49000768	u2 drain	<2	<4	<111
49000769	rm 232 s1 trap interior	<2	<4	<111
49000770	rm 232 s2 trap interior	29+/-4	27+/-4	<111
49006367	rm 232 (after decon)	<3	<3	<111
49000771	rm 232 s3 trap interior	7+/-2	<4	<111
49000772	rm 232 t1 drain	2+/-2	<4	<111
49000773	rm 232 52 drain	<2	<4	<111
49000774	rm 232 t3 drain	<2	<4	<111
49000775	rm 169 t2 drain	<2	<4	<111
49000776	rm 169 t1 drain	<2	<4	<111
49000777	rm 169 u1 drain	<2	<4	<111
49000778	rm 169 u2 drain	<2	<4	<111
49000779	rm 169 s1 trap interior	<2	<4	<111
49000780	rm 169 s2 trap interior	<2	<4	<111
49000781	rm 261 t1 drain	<2	<4	11
49000782	rm 261 t2 drain	<2	<4	<111
49000783	rm 261 u1 drain	<2	<4	<111
49000784	rm 261 u2 drain	<2	<4	<111
49000785	rm 261 s1 trap interior	<2	<4	<111
49000786	rm 261 s2 trap	2+/-2	<4	<111

49000787	rm 263 t1 drain	<2	<4	<111
49000788	rm 263 s1 trap interior	<2	<4	<111
49000789	rm 180 s1 trap interior	<2	<4	<111
49000790	rm 180 s2 trap interior	<2	<4	<111
49000791	rm 180 s3 trap interior	<2	<4	<111
49000792	rm 180 s4 trap interior	<2	<4	<111
49000793	rm 180 u1 drain	<2	<4	<111
49000794	rm 180 u2 drain	2+/-2	<4	<111
49000795	rm 180 t1 drain	<2	<4	<111
49000796	rm 180 t2 drain	<2	<4	<111
49000797	rm 180 t3 drain	4+/-1	<4	<111
49000798	rm 180 t4 drain	<2	<4	<111
49000799	rm 161 s1 trap interior	7+/-2	<4	<111
49000800	rm 161 s2 trap interior	<2	<4	<111
49000801	rm 161 s3 trap interior	<2	<4	<111
49000802	rm 161 s4 trap interior	<2	<4	<111
49000803	rm 161 u1 drain	<2	<4	<111
49000804	rm 161 u2 drain	<2	<4	<111
49000805	rm 161 t1 drain	4+/-2	<4	<111
49000806	rm 161 t2 drain	<2	<4	<111
49000807	rm 161 t3 drain	<2	<4	<111
49000808	rm 161 t4 drain	<2	<4	<111

49000809	rm 143 t1 drain	<2	<4	<111
49000810	rm 143 t2 drain	<2	<4	<111
49000811	rm 143 t3 drain	<2	<4	<111
49000812	rm 143 u1 trap	<2	<4	<111
49000813	rm 143 u2 trap	<2	<4	<111
49000814	rm 143 s1 trap	<2	<4	<111
49000815	rm 143 s2 trap	<2	<4	<111
49000816	rm 143 s3 trap	<2	<4	<111
49000817	rm 143 s4 trap	<2	<4	<111
49000818	far return air duct	<2	<4	<111
49000819	near return air duct	<2	<4	<111
49000820	far fan blades	<2	<4	<111
49000821	near fan blades	4+/-2	4+/-2	<111
49000822	compartment floor & filter rack	<2	<4	<111
49000823	rm 189	<2	<4	<111
49000824	rm 189	<2	<4	<111
49000825	rm 178	<2	<4	<111
49000826	rm 178	<2	<4	<111
49000827	rm 150f	<2	<4	<111



DEPARTMENT OF THE AIR FORCE  
AIR FORCE INSTITUTE FOR ENVIRONMENT, SAFETY AND  
OCCUPATIONAL HEALTH RISK ANALYSIS (AFMC)  
BROOKS AIR FORCE BASE TEXAS

27 November 2002

MEMORANDUM FOR LARRY DOWNING  
DTIC-OCQ  
8725 JOHN J. KINGMAN ROAD, SUITE 0944  
FORT BELVOIR, VA 22060-6218

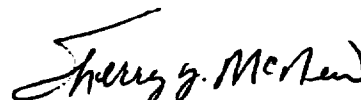
FROM: AFIERA/DOBI (STINFO)  
2513 Kennedy Circle  
Brooks AFB TX 78235-5116

SUBJECT: Changing the Distribution Statement on a Technical Report

This letter documents the requirement for DTIC to change the distribution statement from "B" to "A" (Approved for public release; distribution is unlimited.) on the following technical report: AD Number B158099, AL-TR-1991-148, Postdecommissioning Radiological Survey of Building 628, McClellan AFB CA.

If additional information or a corrected cover page and SF Form 298 are required please let me know. You can reach me at DSN 246019 or my e-mail address is [sherry.mcnew@brooks.af.mil](mailto:sherry.mcnew@brooks.af.mil).

Thank you for your assistance in making this change.

  
SHERRY Y. MCNEW  
AFIERA STINFO Officer

cc:  
AFIERA/SDR (Lt Col Nelson)  
AFRL/HEOA